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SOME STATISTICAL OBSERVATIONS ON THE ETIOLOGY AND SYMPTOMATOLOGY OF DEMENTIA PARALYTICA.

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Read before the Medical Society of the State of California.

Dementia paralytica, also known as general paralysis of the insane or general paresis, and improperly termed, by the laity, softening of the brain, was first noticed by Willis, in 1672, but was not recognized as a morbid entity until 1822, by the French alienist, Bayle, who laid the foundation of the modern idea of general paralysis, by pronouncing the two groups of symptoms, motor disturbances and mental derangement, the expression of one and the same disease.

From this time great interest was taken in the study of this form of insanity, and progress in its understanding was made by numerous investigators, notably Calmeil, by whom it was termed general paralysis in 1826, Baillarger, who named the disease paralytic dementia in 1846, Esmarch, and Jessen,[1] who first expressed the view that general paresis was of a syphilitic origin, Steenberg, Meyer, Westphal, and Schüle; the literature on the subject being especially enriched by the publication, in 1880, of Prof. Mendel's excellent monograph: "Die Progressive Paralyse der Irren." Since 1880, there is perhaps no chronic disease which has been so exhaustively studied as dementia paralytica, it having become, as Dr. Chr. Geill[2] aptly puts it, the petted child of modern psychiatry.

Although the symptomatology of the disease appears to be fairly well determined, there is still considerable difference of opinion with regard to its pathological anatomy. Most text-books speak of it as a periencephalomeningitis diffusa chronica, an anatomical opinion first expressed by Calmeil. Already, in 1857, attention was called by Rokitansky to the blood-vessel disease found present upon microscopical examination of the brain of general paralytics. Since then, especially after Cohnheim had determined some of the phenomena of inflammation, the anatomical process of general paralysis has more and more come to be regarded as taking its origin from a disease of the arteries which may extend throughout the entire nervous system, but which, in the individual case, may be confined to one or the other region of it. The interstitial changes in the parenchyma are, in all probability, the result of the endarteritis[1] of the cerebral vessels, which, during the frequent congestions of the head occurring during the disease, allows an extravasation of the cellular elements of the blood. The degeneration of the cells lining the vessels is thought to be caused by toxic substances circulating in the blood, which may be products of syphilitic infection, or may originate in the organism itself.

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[1] Syphilis und Geistesstoerung, Allg. Zeitsch. f. Psych. 1857, Bd. 14, S. 20.

[2] Bidrag til Bedömmelsen af den progressive generelle Parese, Hospitalstidende, March 16th, 1892.

Although the literature published to date on the subject of general paralysis has almost become unlimited, there are still a number of points, aside from its pathological anatomy, where opinions differ, and it would, therefore, not seem a worthless effort to add to the large statistics already reported, even if the material at one's disposal is neither very large nor altogether free from defects. There are two reasons for subjecting the material I have to present, to scrutiny, and for submitting the results to the judgment of my colleagues, namely: that no reports on this subject have, to my knowledge, so far, emanated from the asylums in California, and that over 84 per cent. of the cases which I am about to present have been observed by me personally during the last seven years, from April 1, 1890, to April 1, 1897. In looking up the record of the cases in which the diagnosis of general paralysis had been made, I have eliminated those in which the diagnosis was doubtful, and have endeavored to single out the cases of alcoholic pseudo-paresis, 8 of which were admitted during the seven years. I have in all cases, where possible, obtained a past history, family and personal, of the patient, from relatives or friends, but in many cases this has been, I regret to say, meager and not to the point. The examiners in lunacy, as is well known, usually give a superficial report, and the information has, therefore, in some cases, been confined to personal observation of the patient during his sojourn in the asylum.

The material upon which these statistical considerations have been based is composed of 69 cases admitted to the Stockton State Insane Asylum, comprising 42 male paralytics admitted between April 1, 1890, and April 1, 1895, all of whom are known to be dead except 2, who are still inmates. Of the deceased, 2 died at two other California asylums, 1 at an eastern asylum, 1 died at home, the others died at this asylum. Of the 2 who are still inmates, the one was admitted Jan. 14, 1891, and is a perfect wreck, mentally and physically, an organism, machine-like in action, in which complete dementia with unintelligible speech, total absence of knee-jerk, paresis of lower extremities, difficulty in swallowing, paralysis of sphincters, etc., has taken the place of maniacal excitement, with extreme grandiosity, Argyle-Robertson pupil, muscular irritability, hesitating speech, and all the other symptoms of a classical form. The other inmate was admitted November 30, 1894, a typical case of paresis, still quite active. The remaining 27 cases were admitted during the two years ending April 1, 1897. Of these, 10 cases have died at the asylum, the remaining 17 are still inmates. In the 46 cases which died at this asylum, an autopsy was performed in 27 instances; in 19 cases the relatives would not permit a *post-mortem* examination. Of the 69 cases, therefore, 50 are deceased, 19 living.

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[1] Anglioella Gaetano il manicomio, anno x p. 3.—Allg. Zeitschr. f. Psych. Bd. 53, p. 3, 1896.

TABLE I.

YEARS.	United States	Colored, native United States	England	Ireland	Sweden	Denmark	Germany	France	Switzerland	Italy	Russia	Mexico	China	Total	Total first admissions	Percentage
1890	2			1			4								235	2.97
1891	4		2			1	1	1	1						203	4.92
1892	6		2		1		3	1				1			249	5.62
1893	4			1						1					176	3.97
1894	2				1		1	1							139	2.87
1895	9	1	1		1		1		1						142	9.85
1896	6		1	2			1			1	1		1		201	6.46
Total 7 years.	33	1	6	4	3	1	11	3	2	2	1	1	1	69	1345	5.13

The question whether general paralysis is on the increase in differentcountries, has, until of late years, not been satisfactorily answered. Prof. v. Krafft-Ebing, of Vienna, in an article published last year,[1] says that recent statistics from various asylums give a positive answer to this question; that there has been an absolute as well as a relative increase, and a greater increase among inhabitants of cities (as much as 33 per cent.) than among those of the country. One could not expect to get an intelligent answer to this question as regards California, from admissions covering but seven years, and especially in a State where the population is so shifting and in an asylum which some months receives an influx of insane mostly from a large city

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[1] Ueber die Zunahme der progressiven Paralyse, in Hinblick auf die sociologischen Factoren.—Jahrb. f. Psychiatrie u. Neurol. Bd. xiii, S. 127.

(San Francisco), and other months mostly from the country. The distribution of cases to the different asylums, the Stockton asylum being at present one of five in the State, is very irregular, being governed generally only by the whim of the Judge. My figures show accordingly surprising variations (see Table I). From April 1, 1890, to April 1, 1893, there is a steady increase from 2.97 per cent. to 5.62 per cent. of paralytics to total first admissions; the following two years there is a decrease to 2.87 per cent.; while during the last two years the highest percentage is reached.

During the seven years the total first admissions of men amount to 1345, of whom 69 were general paralytics, a percentage of but 5.13, which is very small as compared with the reports from other countries. Thus Kaes[1] reports, from an asylum near Hamburg, Germany, as an average for twenty years, 21.99 per cent. Kundt[2] found 17.7 per cent. as an average for twenty-one years, in an asylum in Bavaria. Hougberg[3] reports 11.38 per cent. as an average for eighteen years in an asylum in Finland. An explanation for our low percentage may, perhaps, be found in the difference in the character of the cases committed to this asylum as compared with those received in institutions abroad. There, many cases are not admitted, that are occasionally received in this country, viz: cases of delirium tremens, mild cases of senile dementia, morphinists, cases of epilepsy unattended by severe psychical disturbances, etc. Such cases would swell the number of admissions without adding their pro rata of general paralytics.

The percentage of female paretics to the number of general first admissions to the female department, for the same period (6:443) is 1.35 per cent., and the proportion of women to men is, therefore, 1.35 per cent. to 5.13 per cent., or 1 to 3.8, which is a fair average of the figures recently reported abroad. Formerly, paresis was less frequently met with among women, the proportion being 1 woman to 8 men; now, as von Krafft-Ebing says, in the article above referred to, the proportion is 1 to 3-4. Mendel found in the seventies a proportion of 1:5; Reinhard[4] reports, at the beginning of the eighties, 1:3.2. Heilbronner[5] reports, in 1895, a proportion of 1:4. The nativity of the patients has not been considered with regard to home in city or country, as a large number of our inmates come from the roving part of the population, but I have ascertained the nationality of each paralytic, deceased and living, and find it as shown in Table I. Not quite one-half, or 33 are Americans, which is 5.27 per cent. of 626, the total number of native-born first admissions during the seven years. Among the 69 paralytics, 36 were foreign-born, which is about 5 per cent. of the total number of foreigners admitted; 91 Chinamen were among the foreign-born, and only 1 was a case of dementia paralytica, a percentage of 1.09. Subtracting the 91 first admissions of Chinese, and 15 of colored people, from total admissions, we have 1239 whites, of whom 67 were paralytics or 5.40 per cent. According to these figures, therefore, it appears that dementia paralytica is five times more frequent among white people than among Chinese. Not only is general paralysis apparently a rare disease among Chinamen, but so far, no case of epilepsy has been observed among them. We have, at present, 90 Chinamen as inmates, of whom 46 were admitted prior to April 1, 1890.

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[1] Beiträge z. Ætiol. d. allg. Paralyse.—Allg. Zeitschr. d. Pshych. Bd. 49, S.616.

[2] Stat.-Casuist. Mitteilung z. Kenntniss d. prog. Paral.—Ibid. Bd. 50, S. 259.

[3] Beiträge z. Kenntniss d. Aet. d. prog. Paral.—Ibid. Bd. 47, S. 606.

[4] Beiträg. zur Ætiologie d. allg. Paral.—Allg. Zeitschr. f. Psych. Bd. 41, S, 549.

[5] l. c. s. 24.

Among the 1,345 first admissions were 36 convicts; of these 6 were general paralytics, a percentage of 16.6, as against 4.81 per cent. for non-convicts. Of the 6 paralytics, 5 were convicts transferred from the prison some months after conviction, and one, an ex-convict, who had been convicted of manslaughter, sent to the prison and afterwards pardoned. Four of the 5 convicts had committed burglary, 1 assault with intent to commit robbery. The paralytic convicts form 9.52 per cent. of the total number of general paralytics, which is a percentage but slightly greater than that (8.9 per cent) found by Kaes[1] in an examination of over 1,300 cases. My material is of course too limited to admit of definite conclusions in this connection, but granting the same correspondence in figures on the percentage of paralytic convicts to that of non-convicts, as found by Kaes, general paralysis would seem to be 3.45 times as frequent among convicts as among people who have not come in conflict with the law. Granting that syphilis is more common among convicts, this is significant in connection with the supposed luetic origin of the disease.

All writers have observed that general paresis develops at the age of the greatest bodily and mental development, which the following table, giving the age of the deceased cases at death, illustrates. This table, too, shows death to have occurred in most cases (in 56.25 per cent. of all the cases) between the ages of 35 and 44. Ascher[2] gives this age among men as between the ages of 40 and 45; Kaes,[1] between 35 and 40. The average age of female paralytics is a few years more advanced than in men.

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[1] l. c. p. 143.

[2] Beiträge zur Kenntniss des Verlaufes und der Ætiologie der allg. Paralyse Allg. Zeitschr, f. Psych. Bd. 46. S. 1.

TABLE 2.

Age at Death.	Number of Cases.	Age on Admission of Present Inmates.	Number of Cases.
25–29	2	25–29	1
30–34	5	30–34	3
35–39	16	35–39	5
40–44	11	40–44	5
45–49	10	45–49	2
50–54	2	50–54	1
54–59	3	55–59	1
61 years	1	62 years	1
	50		19

While this is the average age, extremes are met with, thus Heilbronner[2] reports two cases at the age of 67. Geill[3] observed one at 67, and another at the age of 76; and of late years numerous reports of so-called juvenile paresis have been published. The oldest case observed at this asylum died at 61; the oldest living is 62; the youngest was admitted at 25 years of age, and died in an epileptiform attack 18 months after the first symptoms were observed, corroborating the experience of most alienists, that at an early age the paresis is more apt to take an acute course.

In the etiology of general paralysis the factor which of recent years has received most attention from alienists, and concerning which there has been such a difference of opinion, is syphilis. Since Esmarch and Jessen, as already quoted, expressed themselves as believers in syphilis laying the foundation of general paralysis, this opinion has gradually gained adherents, until it to-day is the belief of the great majority, They are, however, not united as to the manner in which syphilis acts as a cause. While some, as Savage, Krafft-Ebing,[4] Mendel,[5] etc., think that lues plays an important role as a predisposing cause with other causes, like potus, excess in venere, trauma, etc., other writers, as Fournier,[6] regard it in its origin as frequently syphilitic, but pathologically as a post—or para—syphilitic disorder; and still others, as Möbius, Strümpell,[7] Geill,

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[1] Beiträge zur Ætiologie der allg. Paralyse; Ibid. Bd. 49, S. 622.

[2] Über Krankheitsdauer und Todesursache bei der progr. Paralyse, Ibid. Bd. 51, S. 76.

[3] Hospitalstidende, R. 3, Bd. x, S. 285.

[4] l. c. S. 127.

[5] Verhandl. psych. Vereine 1895. Allg. Zr. d. Ps. Bd. 51 S. 808.

[6] Lecture on Relationship of Syphilis to General Paralysis, Archives Générales de Medecine, Dec., '94.

[7] Lehrbuch d. sp. Path. u Th. 1886, S. 404.

Hirshl,[1] etc., consider it a real syphilitic brain disease, going almost as far as to say that there is no paresis without syphilis.

Clinical reports from many sources have, of recent years, shown a gradual increase in the percentage of pre-syphilitic infection among the cases of general paralysis. While Obersteiner[2] in 1883 reported but 21.6 per cent. of previous syphilis, Goldstein, in 1886, discovered it in 50 per cent. Geill[3] and Binswanger,[4] in 1891 and 1892, found a certain history respectively in 64.7 per cent. and 72 per cent. of 88 and 100 cases reported. Hougberg[5] (1894) in 81 out of 107 cases, or in 75.7 per cent., and Dengler[6] even reports it present in 93 per cent. of the cases he examined. Although the great majority of reports show these high percentages, some very conservative German writers, Fuerstner,[7] Kaes, etc., think the figures are too high, maintaining that 40 per cent. is the limit of their experience.

It is to be hoped that European clinical investigation will ultimately solve this question. Reports from asylums in the United States can give no valuable information on this point, as we have not the means of tracing past clinical histories, nor is it possible to obtain reliable professional reports in a country where so large a part of the population is constantly changing. I have nevertheless examined into the etiological importance of syphilis, and find a fairly certain history of syphilis present in 26 out of the 69 cases, or in 37.68 per cent. The fifty cases deceased, give a syphilitic history in 19, or in 38.77 per cent. In the rest of the cases syphilis is denied, and data are insufficient.

The importance of the etiological relationship of syphilis to general paralysis becomes apparent when one compares the percentage of cases of insanity, exclusive of dementia paralytica having a syphilitic history with the percentage of syphilitic history met with among paralytics. Thus Hougberg found among 1,413 of the former class 4.24 per cent., while among the latter the percentage was 75.7. Formerly lues was only accorded the third place in the etiology of general paralysis, the increasing difficulties in the fight for existence having been accorded the first position, while alcohol was considered second in etiological importance. In my cases potus was present in 42 per cent. Heredity plays a very important role in all mental diseases, but in general paralysis it seems to be a less prominent factor. Only about one-fifth, or 20 per cent., of general paralytics have a hereditary history, while this is the case in one-third of all insane, exclusive of paralytics. In our 69 cases only 7, or 10.14 per cent., could be shown to have a history of heredity in some form.

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[1] Die Ætiolog. d. prog. Paral.—Wiener klin. Rundschau Nor. 15, 1895.

[2] Die Beziehungen der Syphilis zur Dementia paralytica, Wien. med. Wochenschr, 1883.

[3] l. c. Bd. x. S. 299.

[4] Hirnsyphilis und Dementia paralytica, Hamburg, 1891.

[5] Beitrag zur Kantniss der Ætiologie der prog. Paralyse, etc., 1894. Allg. Z. f. Psych. Bd. 50 S. 610.

[6] Syphilis et paralysie générale, Nancy, 1893.

[7] Beitrag zur Ætiologie der allg. Paral, etc., Allg. Z. f. Psych. Bd. 49, S. 638.—1893.

Besides the above four factors, trauma to the head has been mentioned as a cause by a number of writers. Heilbronner,[1] who examined the clinical histories of 418 men, found a history of severe concussions or injuries to the head in 12.20 per cent. of the cases. In some of these the injury was sustained directly before the commencement of the disease; in others it preceded the latter by a considerable length of time, some occurring even during childhood. Trauma to the head, while playing a considerable role, is, however, often, as mentioned by Mendel,[2] not a cause but a symptom of the disease. General paralytics are apt to receive injuries early in the development of the disease by reason of quarrels and fights induced by irritability of temper, overbearingness in manner, associated with the euphoria or grandiosity, or what is more frequently the case, by reason of the carelessness and helplessness present. The question would always arise whether the first symptoms of general paralysis did not precede the injury. In one of the 69 cases—still an inmate—there is a marked history of trauma. Marked symptoms of mental depression were present on admission, and at the time of the first epileptiform attack, Jacksonian epilepsy was thought of, but gradually there was an unveiling of all the characteristic symptoms of general paralysis.

The following is a condensed history of the case: J. L——, admitted Dec. 5, 1894, native of Sweden, 32 years old; sailor; single; no history of family neuropathy. Patient has not been committed before. Syphilitic infection and addiction to liquor denied. Some weeks before his arrest he was knocked down by a heavy sea on board a schooner; lost consciousness for some time, and had a hemorrhage from left ear. The patient is much depressed, subject to aural and sensory hallucinations; every part of the room which he occupies is charged with electricity; he hears a clock strike wherever he goes; he is fairly cognizant of surroundings, talks coherently, has to some extent disease insight; function of all cerebral nerves intact; no incoördination; gait normal. About a month after admission the patient had an epileptiform attack, with clonic spasms in left side of face and arm. After the attack an inequality of pupils was found present ($r > l$); very sluggish reaction to light of both; tongue points straight; no fibrillary contractions. He complains of headache; when he walks he leans his body towards the left; left arm and left leg are paretic; sphincters intact. A day or two after this the motor weakness in arm and leg has entirely disappeared, but he complains of headache, and the inequality of pupils and sluggish reaction to light are still present; his appetite has become ravenous. Three weeks after this (Jan. 22, 1895) he had a second epileptiform attack (general convulsion). After the attack the head is found turned towards the left and vision fixed. He complained that some one had turned hot steam on him and made his head ache. On Feb. 4th he had a fainting spell, staggered afterwards, and a paresis of right hand was present. About this time the patient became more and more dull and stupid; he stands in one place until made to sit down, and has to be taken to and from the table at meal-time; has become filthy, and noisy at night. In April he became again more mobile, and answered questions, but showed great loss of memory. He gradually became brighter during the spring. July 5th he had another epileptiform attack; was unconscious for about ten minutes, during which he had spasms, but this time in the right side of the face. After the attack the slight right-sided facial paresis and the pointing of the tongue toward the right, which was noticeable before the attack, were more marked. He was subject to aural hallucinations; fibrillary contractions were present in the tongue; Romberg's symptom and Argyle-Robertson's pupil present; knee-jerk exaggerated. From July, 1895, until January 1897, there was but little change in his condition, except that he became more demented. Jan. 31st, 1897, he became maniacally excited, destructive, much confused, and gave expression to extremely grandiose ideas. Boulimia was present; muscular tremor in face and tongue, together with Argyle-Robertson pupil, inequality of same; much exaggerated knee-jerks as before. This maniacal excitement continued for about three weeks. At the end of February he became fairly quiet, and remained so for about two weeks. During the last month he has been noisy, elated, destructive; tries to undress himself; is very grandiose, constantly talking about millions and trillions of gold and silver and diamonds, adding in a demented and incoherent manner the names of Queen Victoria, Nordenskjold, etc. The feeble-mindedness has increased: $2 \times 7 = 10$; $5 \times 6 = 9$; his speech is more defective; he stumbles over ordinary words. Romberg's symptom, Argyle-Robertson pupil, and all the other symptoms noted above are unchanged.

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[1] l. c. S. 82.

[2] l. c. S. 201.

In two among the 69 cases there is a history of a primary attack of insanity, preceding the supposed beginning of dementia paralytica respectively, by two and about four years; in the former it is doubtful whether at the time of the first commitment general paralysis was not already developing. The second case referred to was a patient who was committed to this asylum 3 years and 11 months prior to his second commitment when general paralysis was found present, and who remained in the asylum on the first occasion a little over 3 months, at this time presenting symptoms diagnosed as acute mania. During the interim of over 3 years he appeared to be well. He died in an epileptiform attack of general paralysis 18½ months after his second admission. Diagnosis corroborated by *post-mortem* findings. Even in this case it is not certain but that one is dealing with a remission of the disease occasionally observed, and not with what Hoerstermann termed secondary progressive paralysis.[1]

The duration of general paralysis is usually given as 2 to 3 years,[2] although changes in character can frequently be traced for years before the first marked symptoms show themselves. Mendel's average duration of cases, observed at the Dalldorf Asylum, was 26 months, while Kaes (Friedrichsberg Asylum near Hamburg) found it to be 34.05 months. It is seldom that asylum physicians are in a position to accurately ascertain the commencement of the very first symptoms of the disease, which accounts for the variations in statements made by different writers. In ascertaining the duration of the asylum treatment in cases terminating fatally in the asylum, we are, however, dealing with fixed periods of time, and it is noteworthy that in the 50 deceased cases (only one of these died at home), the average number of months, 16.733, is nearly exactly intermediate between the figures of two of the most noted reports on this subject. Ascher found an average duration of 14.6 months for 643 male cases, while Kaes'[3] figures were 18.6 months in 761 cases. The average for the two reports of 1,404 cases is 16.76 months. It would, therefore, seem that the average case of general paralysis takes its course independently of surroundings, that the difference in climatic influences and in the treatment practised in the asylums near Berlin and Hamburg, and in the one at Stockton, which is no doubt great, does not in the least affect the course of the disease.

General paralysis has usually been classified into the maniacal, demented, melancholy, circular, acute, and spinal or tabetic form. Leaving out the circular form, of which no case was observed, the number of cases of each form among my 69 cases, in the rotation just given, was 32, 27, 7, 2, and 1. The maniacal is the form most frequently met with, the demented being next and almost as frequently observed. According to most writers this was not so years ago, when the maniacal, the so-called classical paralysis, was the type.

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[1] Ueber secundäre progressive Paralyse Allg. Z. f. Ps. Bd. 32, 1875.
[2] v. Krafft-Ebing, Lehrbuch der Psych. Bd. 2, S. 278.
[3] Statistische Betracht. über allg. Paral. Allg. Z. f. Ps. 1895, Bd. 51, S. 116.

With regard to the somatic symptoms of general paralysis, the time allotted only permits me to speak of a new symptom, which lately has been so frequently met with by some, as to give it a diagnostic importance. This symptom is analgesia of the ulnar nerve on pressure, which was first observed by Biernacki in tabes, and to which Cramer[1] afterwards (in 1894) drew attention in general paralysis. It appeared to him to be present in three-quarters of all paralytics examined, while it seemed absent in nearly all non-paralytics. I have so far only been able to find four reports on this subject since Cramer's publication; three of these confirm his results, the fourth is unfavorable. Hess examined 30 male paralytics, and found 76.6 per cent. to have Biernacki's symptom, and 16.6 per cent. normal sensation. In insanity, exclusive of general paralysis and epilepsy, he found normal sensation in 82 per cent., analgesia in 16 per cent. of 100 cases. Baedeker and Falkenberg[2] found bilateral ulnar analgesia in 58 per cent. of 100 male paralytics, 35 per cent. gave a more or less normal reaction on pressure, while 200 non-paralytic men gave 39 per cent. and 61 per cent., respectively. Göbel[3] examined 54 paralytic men, and reports 83 per cent. bilateral analgesia; 3.5 per cent. unilateral analgesia; 9.2 per cent. normal sensation. He found in non-paralytics 43 per cent., 3 per cent. and 54 per cent. respectively. Hillenberg[4] examined 48 male paralytics, and found bilateral ulnar analgesia present in 36 (75 per cent.); unilateral in 5 (10.4 per cent.); in 5 (10.4 per cent.) diminished sensation; in 2 (4.16 per cent.) sensation was intact. In 60 other cases of insanity only 10 (16.6 per cent.) were analgesic.

In making this test the trunk of the ulnar nerve, a mixed nerve, is pressed where it curves around the elbow in the region between the internal condyle and the olecranon, and when the reaction is normal one gets[1] motor results, flexion of the first and extension of the last phanlanges of the four fingers, with adduction of the thumb or the little finger,[2] the well known sensation of the "funny bone," and [3]a general reaction, consisting of pulling the arm back, painful expression of the face, etc. In making the test I have carefully noted results, and repeated it until they were satisfactory one way or the other. I have examined 21 male paralytics, 21 male epileptics (between attacks), and 21 men subject to other forms of mental disease, making no special selection in the last group of cases. The following table gives the results:

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[1] Münch. med. Wochenschr., Nos. 28 and 29, 1894.

[2] Kurze Mitteilung u. Ulnarissymptom bei Paralyse, Allg. Z. f. P., 1895, Bd. 52, S. 196.

[3] Weitere Untersuchungen über das Ulnaris-sympt. b. Geisleskranken, Neurol. Centralblatt, 1895, No. 16.

[4] Beitrag z. d. Symptomatologie d. prog. Paralyse u. Epilepsie, Neurol. Centralblatt, Nos. 8 and 9.

TABLE 3.

	Bilat. Uln. Analg.	Unilat Uln. Analg.	Normal Sensation.	Percentage of Unilat. and Bilat. Analgesia.
21 Paralytics	10	8	3	85.7
21 Epileptics	6	2	13	38.0
21 Insane, exclusive of paralytics and epileptics	2	3	16	23.8

Including the cases of unilateral with the bilateral analgesia as an equally expressive symptom, we have then 85.7 per cent. of analgesia among paralytics, 38 per cent. among epileptics, and 23.8 per cent. among other cases of insanity. My limited experience would therefore seem to corroborate the reports of Cramer, Hess, Göbel and Heillenberg, that ulnar analgesia is characteristic of general paralysis and of differential diagnostic importance, granting the exclusion of epilepsy. The analgesia may be regarded as of central origin, and probably due to disintegration of cortical cellular elements, the centers of sensory processes.

Among the mental symptoms of general paralysis, *i. e.*, among anomalies of the psychic functions, grandiosity is the most typical, though frequently entirely absent. This symptom is generally considered to be based upon the euphoria[1] present, although this latter may not be very marked. It is furthered by various circumstances, such as suggestion, the expression of ideas by others, dreams, sleeplessness, or a maniacal condition which may be present in the earlier stage of the disease. There is no doubt, however, that grandiosity may be based upon hallucinations. Formerly,[2] hallucinations were considered to be rarely met with in dementia paralytica, but this has been denied by later writers. Thus Mendel[3] found hallucinations in one-third of his cases; these may be connected with all the senses.

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[1] Kornfeld & Bikeles. Ueber d. G. u. d. path.—anat. Grundlage d. Grössenwahnes bei Paral. progr.—Allg. Z. f. Ps. Bd. 49, S. 337.

[2] Simon, Die Gehirnerweichung der Irren, Hamburg, 1871.

[3] l. c. S. 95.

Visual hallucinations are, in the majority of cases, of a sad or melancholy nature, and may be present in the early stage of the disease, when they may give rise to errors in diagnosis.

The following case, a present inmate, which was at first not recognized as dementia paralytica, illustrates the marked hallucinations to which paralytics are sometimes subject:

C. N——, admitted August 7, 1895; 37 years old, native of Sweden, laborer, married, two children 3½ and 2½ years of age. No family history obtainable. His wife has had five miscarriages, three since the last living child was born. She says he is not addicted to liquor—luetic infection denied. He is said to have received a cut in the hand one year ago, followed by blood-poisoning, and to have had an attack of "sunstroke," about two weeks ago, June 21st, while working in a warehouse. After this he was much depressed, threatened to commit suicide, and was irritable and ugly toward his family. On examination in the asylum, the patient is found reticent, seclusive, looks melancholy, and says he feels downhearted. He complains of dizziness and says he has pain in the front part of his head. His speech is tremulous, tongue points straight, but shows marked fibrillary contractions. Pupils react to light, but are unequal (l > r); no marked facial paresis. Fine tremor is present in hands; handwriting shows tremor; gait about normal. Romberg's symptom present; knee-jerks equal and about normal. For several months the patient improved to some extent, became more talkative, less depressed, and tremor became less marked; but in January, 1896, he became noisy, subject to aural and visual hallucinations, would shout and curse devils, who were tormenting him, which condition continued without any material change in the character of the hallucinations until March, when he commenced to see flames about his bed, and would beat it with his fists to put out the fire. He saw the flames start in the bed until the whole room was on fire. He also commenced to feel snakes biting him in the back. He would try to pull snakes 4 feet long out of his bed; would tear at his flesh, lay it in folds, grasping it tightly for fear the snakes would escape. He said the devil was in him and had been tormenting him for months; he (the devil) created these snakes; dozens were in his room in the night; 50 snakes crawled into his body through his feet, and have taken all his flesh and blood from him. Satan is going to kill him. During the following month his tormentors, at times, assumed the shape of insects, which infested his body, and his room was full of poison, fire, snakes, and worms, which all came from hell. He turned water on himself to kill a couple of hundred snakes. He now, at times, claims to have the power of the devil. He shouts during the night for help to put out the fire, which is burning him up. From May until October the patient gradually became more quiet, and ceased to be subject to marked hallucinations. In October, 1896, he again became very excitable, but with it elated and grandiose in ideas—he is a millionaire, can buy anything he sees and all he wants; he is no longer cognizant of surroundings, has now a poor memory and shows a general weakness of mental powers. A recent examination shows no change in the mental symptoms; tongue points toward the left, fibrillary tremor present; right-sided facial paresis; right pupil does not react to light, left does; knee-jerk about normal in left leg, almost absent in right.

A very interesting mental state and one not infrequently met with among general paralytics is the so-called attack of fear. A sudden change comes upon the patient, which is almost as sudden as the epileptiform attack so frequently observed; his face suddenly gives expression to the greatest anguish and fear, and he tries to get away as if pursued, sometimes in his struggles with attendants developing unexpected strength in his efforts to escape. In one of the 47 cases, who died at this asylum, these attacks of fear were especially numerous. Whenever seized with the fear the patient would hide in the corner of the room or crawl under the bed, and if he could not get under cover, he would utter such words as these: "Please don't!" "Go to hell!" "Murder," etc., repeating the words and short sentences again and again. He was at the time evidently subject to aural and visual hallucinations, and was so taken up with fear that he appeared oblivious of surroundings. The attacks would sometimes last but a few minutes; at other times for hours. The history of this case is herewith submitted:

J. D——, admitted April, 1892, a native of U. S., 45 years old, capitalist, married, no children; his wife is said to have had one miscarriage. A brother committed suicide, another was killed by Indians. There is said to have been no neuropathy in the family. In 1879 he was engaged in hauling ore from a mining camp in one of the Territories to the nearest railroad station, employing many men and teams, at one time as many as 20 teams of 16 mules each, and earning $1,000 or more a day. At this time he spent money lavishly, gambled around the mining camps, and committed excesses in *baccho et venere*. On one occasion he is said to have indulged in a champagne bath. The excesses were committed at intervals. He married in 1884, and a year or two afterwards his wife noticed the first signs of mental illness. He became irritable and erratic, spent money freely, and invested it in foolish speculations. In the fall of 1891 she became afraid of him, and had him sent to a private hospital for insane, where he remained until the first part of the following April. Being apparently much improved, he was discharged and went to live with his family. Within a week after the return to his home, he became very violent, and during the night drove all his people out of the house at the point of a knife, and in his night shirt ran down the street, stopped a street car, compelled the driver and conductor to leave and took charge of the horses. It took four or five men to subdue him. He was thereupon committed to the State

Insane Asylum. On examination at the asylum it is said that the patient had not indulged in liquor for two years. When 18 years of age he is said to have contracted syphilis—had a chancrum durum with history of secondary symptoms. His wife had a miscarriage some years ago. The patient is fairly cognizant of time and place when attentive, but soon rambles, apparently oblivious of surroundings. He is full of business and schemes. Speech is drawling and tremulous, left-sided facial paresis present; horizontal nystagmus in both eyes, with left-sided divergent strabismus; pupils do not react to light; fibrillary tremor in tongue; knee-jerks present and normal; gait normal. During the first two months of his stay in the asylum, he was most of the time violent, excitable, abusive and noisy. On June 9, 1892, he expressed grandiose ideas for the first time: he is Vice-President of the United States, has control of all Government positions, etc. During the summer of 1892 the maniacal symptoms continued off and on. He was irritable, at times refused food, would undress himself and give away his clothes to other patients On September 16th, and again on September 29, 1892, he had an epileptiform attack, not followed by motor paralysis. From this time until the end of May, 1893, he was fairly quiet, less irritable, but grandiose ideas became more and more typical. After an apoplectiform attack, May 30th, he became filthy in habits and more feeble-minded. July 8th, he had an attack of fear for the first time, and for several days was bewildered, violent, and destructive; speech affected more than ever—a slight amnesic aphasia was present. He had a second attack of fear, similar in character on December 13, 1893. On January 28th and on February 22, 1894, he had epileptiform attacks. About this time it is noticed that he does not hear as well as usual. On April 20, 1894, he had an epileptiform attack, and is found to be quite deaf afterwards. On May 28th he had another attack of fear. During the remainder of 1894 his condition was stationary; he was noisy and violent now and then, elated and grandiose. In the early part of 1895 his knee-jerks were found totally absent; gait unsteady, speech hesitating and stumbling. During 1895 the spells of fear and epileptiform attacks became quite frequent. His deafness became complete, and the mental dulness still more marked; he no longer understands ideas conveyed in writing; has to be fed, dressed and undressed by attendant. On May 22, 1896, he had three epileptiform attacks, and on the following two days a condition of status epilepticus developed, which continued until exetus laetalis, May 25th, 5:35 A. M.

Autopsy.—The autopsy showed extreme thinness of calvarium, averaging 5 mm.; adhesions of dura along sagittal suture; marked external hydrocephalus, with dilatation of lateral ventricles and slight granular appearance of floor of posterior part of same; pia milky, thickened, congested, and adherent to cortex, part of which comes off in places on using great care in removing it; convolutions flattened, sulci shallow. Cortex thin, softening over a small area in left temporo-sphenoidal convolution; in this region cortex is thinner than on opposite side; medullary substance edematous.

Of late it has been the aim of clinical investigations to closely define and limit the clinical and pathological picture of general paralysis. Not only have cases of syphilitic focal diseases of the brain, polyneuritic dementia and alcoholic pseudo-paresis been differentiated from typical general paralysis, but two forms of brain-disease, recently described by Prof. Binswanger[1], of Jena, known as "Chronic Progressive Subcortical Encephalitis," and "Arterio-sclerotic Degeneration of the Brain," have been said to simulate the disease.

The practical importance, however, centers about the differential diagnosis of general paralysis from functional psychoses—as mania, melancholia, acute paranoia, etc., and functional neuroses, especially cerebral neurasthenia. During the early stage of general paresis it is often exceedingly difficult to differentiate it from neurasthenia. That this, when possible, is of great practical importance is clearly shown by the effect, which error in diagnosis of cerebral neurasthenia, may have upon the patient himself, who, having been diagnosed a general paralytic by his physician, and so considered himself, may commit suicide, and also by the way in which such error may affect the happiness and welfare of his relatives.

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[1] In a lecture to the Society of German Alienists at Dresden, Sept., 1894.

SERUM THERAPY IN SURGICAL DISEASES.

By Geo. B. Somers, M.D., San Francisco, Cal.

Read before the Medical Society of the State of California.

Some hundred years before the Christian era, the great Persian King Mithridates, fearing a conspiracy against his life, rendered himself immune to poison by systematically dosing himself with all the toxic drugs then known. This story has been repeated as an interesting anecdote to nearly every school-boy during the ages since that time, but its significance has never been grasped until these last few years of the nineteenth century. That the animal economy may in some way render itself immune to poison and disease, has been a matter of common observation from the earliest times, but the fact was classified among the mysteries of nature. This phenomenon is now beginning to be understood, and under the name of immunity is the goal of the newer therapeutics.

In the light of our present knowledge of disease, the following propositions have received general acceptance:

1. The symptoms of a majority of diseases are due to toxines produced by microörganisms.

2. Blood serum may acquire an antitoxine in the presence of toxines or microörganisms.

3. Both toxines and antitoxines may be separated from the blood by chemical means.

4. Each toxine varies according to the germ producing it, and each antitoxine varies according to the toxine it is designed to neutralize.

5. When present, antitoxine not only protects the animal in which it is found, but also protects or cures other animals when drawn and injected into them.

These propositions are the basis of serum therapy, the new idea which has been received and recognized, and even baptized with a name—orrotherapy. As it becomes perfected in its details, it is destined to revolutionize the practice of medicine and surgery. During the past thirty years, surgery has made wonderful progress and has assumed a place far in advance of its natural position with reference to medicine, but orrotherapy promises greatly to curtail it, by transferring many affections now recognized as surgical to the province of medicine. Thus will the syringe become mightier than the knife.

On this point Dr. Cheever, in a recent address, speaks as follows: "I have always said that the physician is superior to the surgeon; that he has a broader field to look over; that his knowledge must be more extensive to make him a good physician than a good surgeon. Now the physician is coming back; and he is coming back through the great advances being made so rapidly through the discoveries of antitoxine and bacteriology. In ten years, I will venture to say that medicine will be on as high a plane as it ever was."

So much for Dr. Cheever's sentiments. The signs of the times certainly indicate that they are correct, and accordingly it behooves medical men to consider the parable of the wise virgins and have their vials well filled with serum against the coming of the new therapeutics.

The special feature of antitoxine is that though it is strongly antagonistic to germs and their products, it has no harmful effect on tissue cells. To find such an agent has been the aim of bacteriologists ever since the days of Lister, but the search was unsuccessful until it was discovered within the tissues themselves. Antitoxine is nature's antiseptic. The animal cell produces it as a means of self-defence in the struggle for existence. It appears, then, that the first law of nature, self-preservation, is as marked an attribute of individual cells as it is of an organism. Furthermore, the tissue cells are not limited to a single means of defense. They seem capable of devising them to suit varying conditions. Microörganisms may be devoured, destroyed, or rendered inert, or their various toxines neutralized according to circumstances. In the higher orders of animals these different processes are probably carried out through a division of labor among the cells, and it is here that we shall probably find an explanation of the functions of the various ductless glands, whose use has hitherto remained unknown.

The diseases most interesting to the surgeon are those due to or complicated with streptococci and staphylococci. If it can be shown that they may be controlled by serum therapy, the possibilities of its usefulness become immense. We have at once a remedy for diseases which no known therapeutic agents can control, as for instance, septicemia. More has been accomplished in investigating the antitoxine of streptococci, than that of any of the other pus-producing germs, and accordingly, for purposes of illustration, it will be convenient and quite sufficient to examine what has been done in the diseases due to this germ alone.

At the outset, there are several difficulties met with in attempts to produce the streptococcic antitoxine, which are not met with in the production of some others, as for instance, that of diphtheria. The difficulties are: (1) Streptococci are difficult to propagate, for they usually lose their virulence after a few cultures. (2) For purposes of immunizing, a separate toxine cannot be easily obtained from them, for they do not readily give off their poison to the culture medium. The toxine seems closely connected with the protoplasm of the germ. (3) There are several varieties whose differences are not well made out, and accordingly it becomes difficult to tell which variety it is necessary to cultivate for a particular disease.

Of these difficulties the first has been solved by finding an appropriate culture medium, and the second by not attempting to separate a toxine, but by injecting cultures of the germs themselves.

In reference to the varieties, a most interesting discussion has arisen, some observers maintaining that all the streptococci are similar, and others that they are radically different. Marmorek states that both the action and the appearance of the same germ vary under different circumstances. The question arises whether these variations are due to different kinds, or to changed appearances in one and the same kind. The following facts are brought forward in evidence: Streptococci of exactly the same appearance under the microscope may, in equally susceptible animals, give rise in one case to a systemic infection with fatal results, in another to only a small local lesion and finally, perhaps, show themselves entirely inert.

Again, it has been found that a streptococcus, which has caused death in a man, often produces only a slight reaction in an animal.

As to appearances, Zenoni shows that they vary in size and grouping according to the culture medium used. Marmorek found the specimens from the same culture after inoculation in a dog would differ from those obtained from the inoculation of a mouse. Again, Mme. Sieber-Schumoff, in a comparative study of the pus coccus, the streptococcus of erysipelas, that of scarlet fever, and that of sporadic cow-pox, found that after a few cultures, their differential characteristics disappeared. Finally it is a matter of common experience with surgeons to meet with an erysipelas after incising an abscess, even where every antiseptic precaution has been taken. If all exterior sources of infection can be eliminated in such a case by antiseptic precautions, then the cause of the erysipelas and of the abscess must be the same.

Taking these facts into consideration, the weight of evidence would seem to be in favor of the view that the various streptococci are homologous. Were this true it would be of immense practical importance to serum therapy, for then the same antistreptococcic serum would answer for the treatment of all varieties of streptococcic disease.

On the other hand, Fehleisen presents a simple, unanswerable argument in opposition to all the above observations. It is that no one has ever demonstrated that erysipelas can be produced at will by any other germs than those obtained from a previous case of the same disease. In the face of this fact all homologies fall to the ground, which leads to the conclusion that in order to be accurate in the application of serum therapy against streptococci, we must first determine the exact germs and then find a corresponding antitoxine.

Bearing on this point a word may be said in reference to the cure of malignant tumors by inoculation with erysipelas. Coley's procedure is now well known, and many cases of cure have been reported, but also many failures. It may be pointed out that this treatment is not serum therapy proper. It is not the use of an antitoxine directly antagonistic to the specific cause of the disease, but it is the use of a radical measure which accidentally and occasionally destroys the malignant tumor. It is an empirical rather than a scientific measure.

What practical results have followed the use of antistreptococcic serum? Reports of its use are increasing from day to day, in all pathological conditions where pus-producing germs are found. These include erysipelas, septicemia, puerperal fever, phlegmon, scarlet fever, the suppurative complications of tuberculosis and many other conditions, accompanied by deep seated suppuration. It is to be noted that the same variety of serum is used in all these cases, and it is not to be wondered at that the results are often disappointing; and yet, occasionally, cures are reported. In the latter cases the infection is probably simple, and the antitoxine serum appropriate to the cause. But in many cases there is a mixed infection and the complicating germs may be the chief cause of the disease, requiring the use of several kinds of antitoxine.

In order to illustrate the use of the serum, a few details from cases reported will be given. In erysipelas there is a notable absence of reports. This may be due to the fact that the present fixed methods of treatment are apparently followed by good results, the disease either soon terminating favorably or not presenting serious enough symptoms to demand resort to radical measures. Marmorek sums up his experiences as follows: "The conviction that antistreptococcic serum is really active in erysipelas is gained not so much from the statistics which we offer as from observation of some very severe cases. In fact, improvement in all symptoms shows itself a few hours after injection."

In septicemia a number of cases, post-operative, puerperal and peritoneal have been reported. In a case described in the *British Medical Journal* by Ballance and Abbot, a physician became infected by a wound of the thumb while operating on a case of septic peritonitis. The infection was so severe that lymphangitis, adenitis, vomiting, chills, high temperature, scarlet erythema, puffy face and eyelids and mental stupidity were noticed within the first 36 hours after the infection. At the end of the second day the temperature was nearly 105° F., rash hemorrhagic, bleeding from the nose, and slight albuminuria. The condition was alarming. Sixty hours after infection the first injection of 3½ cubic centimeters was given, and repeated every four hours. Six hours after the first injection improvement set in which was followed by rapid recovery.

In the *Medical Record*, of April 3, 1897, Grandin reports 9 cases of suppurative peritonitis, which were treated with multiple incisions, flushings of the peritoneal cavity, drainage, etc. All of these cases except one died. The exception was the only one treated with antistreptococcic serum in addition to the above measures. The outcome of this case, which was as apparently hopeless as any of the others, impressed the author very strongly, and though he distinctly states that no conclusion can be drawn from a single example, yet from the circumstances of the case he feels encouraged to believe that the remedy is of real value in combatting the horrors of this disease.

In puerperal fever Williams reports in the *British Medical Journal* a series of six severe cases in which he used antistreptococcic serum without omitting the usual local and general remedies. One of these cases ended fatally, but the rest showed improvement after each injection and finally recovered.

Boucheron reports the case of a woman who had suffered for years from a purulent inflammation of the lachrymal sac. He made subcutaneous injections of serum, and noted immediate improvement. A cure was obtained after two more injections at intervals of 14 and 8 days.

Another instance of deep seated inflammation cured by this serum is a case of otitis media, complicated with mastoiditis, where the symptoms were very severe, and where streptococci were found in the pus from the ear Twenty cubic centimeters of the serum were injected into the thigh, and an improvement was noted the next day. The temperature fell, the discharge from the ear gradually ceased. The mastoid region lost its inflamed appearance, and in ten days the child was entirely cured.

So much in illustration. The object in gathering the above points has been to call attention to serum therapy. Widespread interest in the subject will aid in perfecting it, and if it but fulfills its promise of providing a remedy for septicemia alone, it will be an invaluable boon to the human race. The most that may be said against its use in surgical diseases is that its details are not perfected, and the practical evidence in its favor is as yet weak. But its principles are based on scientific research, and from the analogy presented by results obtained in experiments in the animal world, and from the universally acknowledged value of the remedy in certain diseases affecting man, as, for instance, diphtheria, we are justified in the belief that it will soon prove an efficient remedy in surgical diseases.

533 Sutter sreet.

GUNSHOT WOUNDS OF THE LIVER, WITH A REPORT OF TWO CASES.

By David Powell, M. D., Marysville, Cal.

Read before the California Northern District Medical Society.

An eminent English surgeon has said that the treatment of wounds, operative and accidental, "is not merely the first stone, but also the corner stone, of surgery." The truth of this maxim is universally acknowledged. The treatment of wounds was the first work in which surgeons were engaged; its importance was recognized from the earliest period of Greek civilization through every epoch in the history of medicine; and to the successful management of wounds surgery to-day owes its greatest triumphs.

The priest-physicians in the ancient temples of Greece were not unskilled in the treatment of wounds. An account of their observation and patient study of the phenomena of disease, and their skill in the treatment of many forms of injuries, is handed down to us and forever preserved in many valuable works of antiquity; in the lyric poems of Homer, who in immortal verse sang the praises of Podalirius, Machaon and other warriors, who are represented as having considerable skill in surgery; and above all, in the wonderful writings of that distinguished disciple of Æsculapius who presided at the Asclepion of Cos. The marvelous works of Hippocrates reveal a surprising knowledge, even at that early period, of the nature and management of wounds, ulcers, fractures, etc.; and evince a familiarity with the natural history of diseases and clinical methods, and a proficiency in prognosis perhaps unrivaled even at the present time.

Nor is it strange that in ancient and medieval times there were those who possessed more or less skill in the treatment of wounds. The exigency of the times developed a practical knowledge of surgery, crude though it may seem in the light of the achievements of the present day. The people were turbulent, aggressive and warlike; and the care of the wounded who fell in battle and physical strife, gave opportunity for the accumulation of much that was useful and practical in the treatment of wounds. Severe athletic contests must often have been attended by serious accidents, and physicians were always present to minister to the injured. In the days of chivalry, the spear thrust of the armored knight in deadly combat with his adversary was often "deep and wide;" but often, too, did "healing balsam" and the "deftly binding up" of such wounds bring about recovery.

So we find that the subject of wound treatment has enlisted the most thoughtful consideration throughout every period of the history of medicine; and yet, "it has ever been one of the *opprobria* of the art." Indeed, had any one ventured to suggest, even a quarter of a century ago, that the treatment of wounds would reach the degree of perfection which it has attained of late years, the prediction would have been universally regarded as but the fanciful dream of the impracticable.

Before the era of antisepsis, a very large percentage of all abdominal wounds were fatal. The ratio of recoveries from penetrating wounds of the abdomen in both the English and French armies in the Crimea, was very small. In the English army, according to Longmore, out of 124 cases, 115, or 92.7 per cent., died. Out of 121 cases in the French army, 111, or 91.7 per cent., died. In the Surgical History of our Civil War, Dr. Otis reports 3,489 cases, with 3,035 deaths, a mortality of 87 per cent. A large number of these fatalities undoubtedly resulted from perforation of the stomach and intestines, and since celiotomy and enterorraphy were not then practised, it may be safe to assume that, in the light of the present accepted methods of surgical procedures in such cases, the mortality, under the same conditions, would be very greatly reduced.

Gunshot wounds of the liver, complicated as they usually are with serious injury of other viscera, have always been attended by a large mortality. In military practice there have been very few recoveries reported. Longmore says, "if the liver be wounded, death usually results from primary hemorrhage, or from inflammation consequent upon extravasation into the peritoneum." Hunter McGuire states that in only few instances have patients recovered after gunshot wounds involving this viscus. About 12 instances altogether have been published by Guthrie, Henner, Cooper, and others who were engaged in military practice during the peninsular campaign. Only 1 case is known to have survived from the Crimean war; and 2 officers who were shot through the liver during the Sepoy mutiny in India recovered. During the war of the rebellion, 175 cases of gunshot wounds of the liver were reported, with 62 recoveries. Dr. Otis, however, in the Surgical History of the War, states that in only 32 of these cases were the recoveries undoubted—a mortality of over 80 per cent.

Later writers, except in connection with the general subject of abdominal surgery, seldom mention these injuries *per se*. Indeed, in civil practice, wounds of the liver uncomplicated by injuries of other important structures, must be extremely rare, and the principal interest attaching to the cases that I have to report, is perhaps found in the fact that they demonstrate the possibility of recovery after a missile of large caliber has penetrated this organ, inflicting a serious wound, the patient exhibiting all the symptoms of a severe injury.

With these preliminary observations, I will now relate the following two cases of uncomplicated gunshot wounds of the liver, which came under my care:

Case I.—August 23, 1894. Sing Kim, a short, stout Chinese woman, about 25 years of age, was shot by one of her countrymen. The bullet from a 41 caliber Colt's pistol entered about one inch to the right of the spinal column, opposite the ninth dorsal vertebra; ranged downward and lodged under the skin between eighth and ninth ribs, in the right hypochondrium. I saw the patient a short time after she received the injury, and found her lying on the floor of a dirty Chinese apartment, in a condition of severe shock and apparently suffering but little pain. She was placed on a rude cot, and during the examination of her wounds and the subsequent dressing she made no complaint. Although her condition was indicative of a severe injury, I was at first inclined to believe that the missile had not penetrated the cavity, but had glanced around the body and lodged, as stated, near the margin of the ribs in front. Upon careful examination, however, I found that a small Nélaton porcelain tipped probe passed readily into the cavity, and the direction of the wound indicated that the bullet had encountered no obstacle in its course to its place of lodgment. A superficial incision readily reached the bullet, the removal of which was followed by considerable hemorrhage. Under chloroform anesthesia, I hastily enlarged the wound through which the bullet had been extracted, followed the track of the latter to the liver, washed it out with an antiseptic solution, and then packed the whole wound with strips of iodoform gauze. There was no further hemorrhage. After applying the usual dressings and administering $\frac{1}{4}$ of a grain of morphine with $\frac{1}{100}$ of atropine hypodermically, the patient was placed in bed and made as comfortable as the surroundings would permit, and upon visiting her several hours later, I found her, to my surprise, in a very favorable condition—pulse 90, temperature and respiration normal. August 24. Had passed a comfortable night—temperature 99.6°; pulse, 100; respiration, 38. August 25, 10 A. M., temperature, 102°; pulse, 130; respirations, 40. August 25, 8 P. M., temperature, 101.5°; pulse, 135; respirations, 36. August 26, 10 A. M., temperature, 99.5°; pulse, 120; respirations, 36. August 26, 8 P. M., temperature, 103°; pulse, 140; respirations, 38. Dressed wound —tampon removed—no hemorrhage; wound looked well, no suppuration. August 27, 9 A. M., temperature, 100.2°; pulse, 104; respirations, 28. August 27, 8 P. M., temperature, 101°; pulse, 120; respirations, 32. August 28, 9 A. M., temperature, 99°; pulse, 100; respirations, 32. August 28, 8 P. M., temperature, 101.7°; pulse; 120; respirations, 36. August 29, 9 A. M., temperature, 99.5°; pulse, 100; respirations, 38. August 29, 9 P. M., temperature, 100.7°; pulse, 120; respirations, 38. August 30, 9 A. M., temperature, 99.2°; pulse, 104; respirations, 40. August 30, 10 P. M., temperature, 100.5°; pulse, 100; respirations, 36. August 31, 7 P. M., temperature, 99.5°; pulse, 100; respirations, 38. After the ninth day temperature, pulse and respirations soon reached normal, and the patient, under the most adverse circumstances, so far as care and sanitary conditions are considered, was discharged cured, on the sixteenth day after the reception of the injury.

CASE 2.—W. R.——, æt 40, received two gunshot wounds on the evening of May 17, 1892. One wound was located an inch below the clavicle on the left side, the bullet penetrating the apex of the lung and lodging under the skin near the margin of the scapula opposite the fourth dorsal vertebra. I may state here that this wound healed rapidly, and aside from a free bloody expectoration during the first 24 hours gave no trouble. The other wound was more serious. The bullet entered the right hypochondrium at the inferior margin of the ninth costal cartilage, ranged upward, passed through the right lobe of the liver, and lodged somewhere in the muscular tissue posteriorly. The patient had been conveyed in a buggy over a rough road three miles from the scene of the shooting, and when I saw him half an hour later his condition was critical. Temperature sub-normal; pulse accelerated and feeble; respiration rapid and irregular; skin cool and moist. Favorable reaction followed the application of restoratives, and later enabled a more thorough examination and dressing of the wounds. The hemorrhage from the chest wound was slight and easily controlled. The bullet was extracted through a small incision in the skin, and both this and the wound of entrance were dressed by aseptic occlusion, and they required no further attention. There had been considerable hemorrhage from the abdominal wound. An incision through the abdominal wall, using the director as a guide, disclosed the bullet wound in the liver. A probe carefully inserted failed to locate the missile, but demonstrated its course through that organ, and proved that it was imbedded in the tissues beyond. No further attempt was made to find it. After irrigation with sterilized water and the removal of several pieces or shreds of clothing and blood clots from the wound, it was packed, as in the first case, with iodoform gauze. The gauze, besides acting as a plug in the ragged tear in the liver, thereby effectually controlling the hemorrhage, served as a drain in the track of the bullet. I then sutured the deep structures in layers with catgut, and the skin and underlying tissues with silk, leaving a space at the upper angle of the wound, occupied by the gauze, for drainage. On the third day the wound was dressed and the tampon removed. At no time did the temperature rise above 100.2°, and the patient's condition after the first 24 hours was uniformly favorable. He made a rapid recovery, and was well at the end of two weeks.

In gunshot wounds of the abdomen, undue importance has been given to the presence or absence of shock in the differentiation between simple penetrating wounds and wounds complicated by visceral injuries. I have observed severe shock attend even a non-penetrating wound, while in serious injuries of the intestine, with multiple perforations, I have more than once found the patient exhibiting but little evidence of shock. In the case of the Chinese woman reported, it was practically absent; while in the second case, with almost an identical abdominal lesion, it was extremely severe.

Age, sex, temperament, mental condition, etc., modify shock, and must all be considered in estimating the diagnostic value of this symptom. Indeed, all symptoms, general and local, fail in most cases to point out the true state and extent of these injuries, and often nothing short of laparotomy can be depended upon in arriving at a correct diagnosis.

312 D street.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal., and

WM. FITCH CHENEY, B.A., M.D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal.

Submammary Infusions of Salt Solution for Puerperal Hemorrhage.—DR. J. G. CLARK, of the Johns-Hopkins Hospital, recommends the use of submammary saline infusions, where exhausting hemorrhage has taken place from abortion or full-term labor, as originally suggested by Edebohls. Graduated glass jars of 1,000 cubic centimeters capacity are used as reservoirs for the solution, which is made of the strength of 6:1000 of common salt in warm sterilized water. The jar is connected by five feet of rubber tubing to a long, slender needle, similar to an aspirating needle. Before giving the infusion the breast is carefully disinfected, especially at its dependent portion. It is then grasped with one hand and lifted well up from the thorax, while the needle, with the fluid flowing from it, is quickly thrust beneath the gland. If the fluid does not flow by its own pressure, it can be forced in by stripping the tube from the reservoir downward, driving the column of fluid ahead into the tissues. At least a quart of solution should be injected altogether, part under each breast. No bad results are possible, if strict cleanliness is observed, and the blood loss from hemorrhage is at once made up by the normal salt solution absorbed.—*American Journal of Obstetrics*, June, 1897.

The Use of Antistreptococcic Serum in Puerperal Sepsis.—Before the Section on Gynecology of the College of Physicians of Philadelphia, a number of papers on this subject were presented last March. BARTON COOKE HIRST reported 3 cases in which he had administered the serum; one was given 30 cubic centimeters of Marmorek's antistreptococcic serum on three successive days without the slightest benefit, but finally recovered under other treatment; the second case received the same amount of serum, but received no benefit and subsequently died; the third case, after receiving 5 cubic centimeters, was made decidedly worse. the temperature going higher, the pulse becoming rapid, irregular, and weak, and a profuse sweat showing itself soon after the injection. RICHARD C. NORRIS reported 1 case of puerperal sepsis, that was given 10 cubic centimeters of Marmorek's serum, after failure of the usual constitutional treatment with alcohol, predigested liquid food, quinine and strychnine; within 12 hours after the injection, the temperature fell from 105.8° to 98° F., and the pulse from 144 to 96; subsequent injections of 3⅓ centimeters twice a day were made for four days following, and the patient made a perfect recovery. GEORGE E. SHOEMAKER reported 1 case treated with the serum for sepsis following self-induced abortion; other treatment was employed simultaneously, but in spite of all, the patient died. From cultures made at the autopsy from diseased tissues, it was found that infection was by means of the colon bacillus, not the streptococcus, which accounted, perhaps, for the failure of the anti-streptococcic serum. EDWARD P. DAVIS reported 3 cases; one who had profound sepsis following abortion, with a temperature of 105° and rapid and feeble pulse, was given 10 cubic centimeters of Marmorek's serum, with immediate and permanent good effect, making a complete recovery; in the other 2 cases, the use of the serum was without result and both died. J. M. BALDY reported 1 case, in which the serum not only failed to do good, but seemed to hasten death; there was an abrupt rise of temperature following the injection of 10 cubic centimeters, and the patient died four hours later. Finally, a series of 21 cases collected from the *Lancet* and the *British Medical Journal* for 1896, was reviewed by JOHN B. SHOBER; there were 17 recoveries and 4 deaths; the immediate effect upon the general condition and temperature was, with one exception, always beneficial.—*American Journal of Obstetrics*, May, 1897.

SURGERY AND ANATOMY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal., and

GEO. B. SOMERS, M.D., San Francisco, Cal.

Lockwood's Operation for Excision of the Knee.—The operation is performed as follows, the idea being to retain the advantages which the arrangements of the ligaments and articular ends afford: First, the knee being bent at half a right angle, a transverse or slightly curved incision is carried across the center of the ligamentum patellæ, from one tuberosity of the femur to the other. The ligamentum patellæ is divided and the joint opened. The joint is now bent to a right angle and the extent of the disease ascertained. Then the synovial membrane is removed with knife and scissors as carefully as if it were full of malignant disease. If any synovial membrane be left behind tubercle is likely to grow in it; also, it is apt to inflame and secrete fluid, which may accumulate and become septic. In removing the synovial membrane it is convenient to leave the part behind the condyles until the femur has been sawn. As the synovial membrane is taken away the ligaments come into view. Healthy ligaments are to be preserved. Whether it is always right to keep both the crucial ligaments remains to be seen. It is certainly very hard to remove all the synovial membrane without cutting the anterior. Nevertheless the crucial ligaments help very powerfully to hold the tibia and femur together; the posterior one prevents the tibia falling backwards as the leg lies extended on the bed; the anterior prevents displacement of the tibia forward, but this is of less importance. It is better to destroy one or both crucial ligaments rather than leave any diseased synovial membrane behind. The internal and external lateral ligaments, being outside the joint, are much easier to save. In the next stage of the operation, after the femur and the tibia have been sawn, these ligaments are of the greatest use in keeping the bones firmly together. The articular surface of the patella, and if necessary its cancellous tissue, is now gouged. Then the trochlear surface of the femur is sawn off, leaving a flat surface upon which the upper part of the patella fits. The femur itself is next raised vertically by the assistant, and the greater part of its articular surfaces taken away by two saw cuts, which begin at the convexity of the condyles at the edge of the articular cartilage. These saw cuts are carried obliquely into the intercondylar notch of the femur until they converge, entering the notch at the edge of the articular cartilages and below the attachments of the crucial ligaments. In making these cuts, the lower part of the rather extensive attachment of the crucial ligament cannot always be saved, but as the upper attachments spread out a good deal, the greater part can be preserved. The antero-posterior plane of these cuts should be at right angles to the axis of the femur. By these saw cuts a deep notch is made in the femur, leaving some articular cartilage in the front and back of the condyles. This cartilage is either torn off or removed with a sharp spoon or gouge. The tibia is treated on the same principle as the femur. With a narrow saw two oblique cuts are carried upward from the epiphyseal line to converge at the base of the spinous process. Here, again, the articular cartilages can be removed without destroying the lower attachments of the crucial ligaments. These structures occupy but a small area of the upper surface of the tibia in front of and behind the spine; indeed the posterior is attached to the posterior surface of the tibia in the popliteal notch. The bone may be sawed without destroying the lower attachments of either the external or of the internal lateral ligaments, the latter being attached down the shaft of the tibia quite out of harm's way. The antero-posterior direction of the plane of these saw cuts is at right angles to the axis of the tibia; their obliquity should correspond to that of the sawn surfaces of the femur.—*Lancet*, March 13, 1597.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

The Fundamental Principles of the Galvano-Cautery.—DR. HORACE CLARK formulates the following principles in regard to the use of the galvano-cautery in nose and throat work: (1) One should be particular in securing the proper degree of heat—dull red, bright red, or white, as the case may demand. (2) But one side of the nose should be cauterized at a time. (3) The field of operation should be properly prepared according to the principles of antiseptic surgery. The parts should be dried after application of the local anesthetic. (4) In certain conditions of the lower turbinated body where the hypertrophy is uneven, too sanguine promises should not be made. (5) The cautery should be sparingly and cautiously used on the septum, and great care should be taken not to touch the septum in burning the turbinate bodies. (6) It is well to avoid the use of the cautery in syphilitic or tuberculous patients. (7) A medium-sized flat knife is most generally useful. The middle turbinated should be sparingly cauterized, and should not be touched by inexperienced hands. (8) The cautery electrode should be carefully removed before the current is turned off. (9) The appearance of excessive dryness in the throat after the use of the cautery should contraindicate its further employment. (10) The cautery should never be used in the naso-pharynx or larynx by untrained hands. The posterior ends of the inferior turbinates should not be burned by introducing the electrode anteriorly. The tip of the electrode must always be kept in plain sight to avoid injury to the cushion of the eustachian tube. (11) The subsequent treatment should be restricted to rest and cleaning to remove the accumulated secretion. (12) When cauterized parts come in close proximity they should be separated mechanically to prevent adhesion. This can be accomplished by a piece of rubber band used upon ordinary preserve jars. Before using they should be sterilized in carbolic solution, washed in sterilized water and dipped in sterilized oil.—*Medical Record*, May 15, 1897.

Holocaine in Ophthalmic Practice.—DR. R. BRUDENELL CARTER describes the effect of holocaine, a new local anesthetic, upon the eye. He had found by experience that eucaine had not fulfilled its early promises of usefulness in ophthalmic practice. The first application was likely to be quite painful for several minutes in many people. He was therefore anxious to find some substitute for cocaine that was free from its disadvantages. DR. DENEFFE called attention to holocaine last March, as being an effective anesthetic for ophthalmic purposes and possessing advantages over cocaine. He said that by applying a few drops of a 1 per cent. solution to the eye three times at intervals of fifteen seconds, complete anesthesia would be produced in three minutes, without pain, without change in the diameter of the superficial vessels, without dilatation of the pupil, and without paralysis of accommodation. DR. CARTER used the drug in a cataract operation and in slitting up of the lachrymal canaliculus. He found that it acted promptly; that there was no effect upon the conjunctival blood vessels, the pupil, or the accommodation, and he concludes that it is likely to be found highly useful in ophthalmic practice.—*Lancet*, May 29, 1897.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

The Treatment of Infectious Pyelonephritis.—MESSRS. BOVET and HUCHARD give an instance of the successful use of subcutaneous injections of a saline solution of sodium chloride. They were dealing with pyelitis from repetition, which, after a chilling, passed rapidly into an infectious pyelonephritis with phenomena of general intoxication. These cases are by no means rare among the richer patients, whose occupation does not permit them to satisfy, at the desired time, the excretory functions of the intestine and bladder. If careful inquiry is made, it will be learned that their urine is almost always turbid, of a strong odor, and deposits mucus, often pus, and perhaps with a trace of albumin. With these patients, after a too copious dinner or a fatiguing ball they may be taken with a chill, which is followed by a fever, bilious attack, and pains in the lower limbs, which may suggest the onset of influenza or typhoid fever. The urine, upon examination, will be found to be diminished in quantity, dark in color, depositing mucus or pus containing a third, or less, of 1 per cent. of albumin and a notable proportion of urobilin. This deposit may already contain the germs of a latent infection, and needs only an opportunity to awaken a condition which leads to uremia or other form of poisoning. Such an instance is reported in detail in which success followed the use of a 7 *per mille* serum, both hypodermically and by the rectum. The urine showed the following changes: (1) Increase from 20 to 50 and even 65 ounces. (2) The chlorides increased more than fivefold. (3) The albumin diminished to one-thirtieth of its original amount. The largest daily amount used hypodermically was 26 ounces; by the rectum it was 66 ounces.—*Bulletin Générale de Thérapeutique.—American Journal of Medical Sciences*, June, 1897.

Pelvic Cellulitis following Gonorrhea.—R. W——, aged 20, was admitted on August 11th with a large venereal sore inside the prepuce, phimosis, and urethritis; circumscision was performed, and the wound healed by granulation.

A month later he had an attack of cystitis and right epididymitis, which was treated by rest, irrigation of the bladder with listerine, and fomentations. On October 11th, the left epididymis was affected, the inflammation involving the left cord; there was slight pyrexia. On October 24th he complained of pain in the left iliac region, which was dull on percussion and somewhat tender; the bowels were loose and the stools contained mucus. On examination *per rectum*, the prostate was found to be enlarged and tender. On October 26th there was hectic pyrexia. The patient now complained of very acute pain in the left iliac region, which was dull to level of umbilicus, and the left lower abdomen was distinctly prominent. The bowels were very loose, and there was a constant discharge of clear mucus *per anum*. On examination, the bowel was found to be almost occluded 2½ inches from the anus by a rounded hard swelling on the left side, the size of a fetal head at term. Fluctuation was detected in the left scrotum. Assisted by Surgeon May, who gave ether, I opened a small abscess on the outer side of the left testis, and as the cord was very tense and swollen I extended the incision to the left internal ring; several localized collections of pus were found in the substance of the cord. As I now thought I could detect fluctuation in the left iliac fossa, I extended the incision towards the left anterior superior iliac spine, and on reaching the transversalis fascia above the internal ring, a tense swelling presented; this was opened and half a pint of pus escaped. The finger could then be passed over the iliac fossa to the brim of the true pelvis. A double drainage tube was inserted, and iodoform dressings applied. The cavity was irrigated daily and quickly closed. Five days after the operation the bladder and rectal symptoms disappeared.—HOWARD TODD, in *British Medical Journal*, May 8, 1897.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

Changes in Drug Administration.—In an article on "The Progress of Therapeutics in the Victorian Era," DR. D. J. LEECH, of Manchester, Eng., says: An account of the progress of therapeutics in the Victorian period would hardly be complete without an allusion to the change in the mode of administration of medicines which has occurred, especially in recent years. The enterprise of pharmacists, and especially of wholesale chemists, has led to the introduction of much more pleasant and convenient ways of administering remedies than existed in olden time. Instead of the powder and the pill we have the capsule and the dainty granule, and even the draft is at times replaced by the compressed tablet. Whether the concentrated condition in which medicines are introduced into the stomach by some of the newer methods is an advantage remains to be seen, but the new forms are rapidly replacing the older, and are likely still further to supplant them. Another result of the change which has come over the administration of drugs is that active principles are more used than heretofore, because they are more easily included in convenient forms than crude drugs. But, apart from this, the preference for the active principles has been of late years gradually increasing, and the time must come when they will largely replace many of the preparations now used. With our many new agents and methods, what is our success in therapeutics as compared with what it was sixty years ago? We can assuredly say, we are able to relieve pain in a manner quite impossible in earlier days, and that the progress of therapeutics has diminished enormously the sum total of human suffering. There is, indeed, only one disease—myxedema—incurable before, which, owing to the progress of therapeutic knowledge, we are now able to cure, or at least to ward off continuously by drug treatment, but there can be no doubt that we are able, by new remedies and methods, to save life in a variety of ailments where older therapeutic means would have failed. It is equally certain, however, that a large number of diseases are still as little amenable to treatment as in former years. But if we have not yet learned to cure these diseases, we have in many cases attained some knowledge of the direction in which we must carry on our researches.—*Practitioner*, June, 1897.

The Treatment of Whooping-Cough by Naphthalene.—It occurred to me two years ago to try naphthalene in the treatment of whooping-cough. I confess not having observed much improvement in some cases when I applied that drug; but that was owing partially to inability to thoroughly study and observe the cases under treatment. During the last epidemic I determined to go into the treatment very carefully, and the results have been most satisfactory. I treated 12 cases in children, in whose mothers I could in every way place confidence with regard to veracity, and whose intelligence and common sense were above the average. The ages ranged from 3 to 8 years. The usual routine of treatment was tincture of belladonna and potassium bromide in varying doses and naphthalene fumes inhaled continuously day and night. A simple method of procedure was to instruct the child's mother to make a small muslin or linen bag containing the drug, and to suspend it around the child's neck. At other times I ordered the drug to be well rubbed into the child's clothes. The floor of the sick chamber was also sprinkled with it. From careful inquiries made, and visits paid at irregular intervals, I am quite sure that the frequency of the paroxysms was very much diminished, and the patients made more comfortable in every way. I selected the above cases, among a great many I had under treatment, not with regard to the malady, but in reference to the integrity and truthfulness of the patients' friends. So far as the prophylactic influence of the drug is concerned, I may note that in some families infected with whooping-cough, one or two members in each escaped infection. At present, however, I do not wish to attribute too much to the usefulness of the drug in that direction.—PHILIP J. BRAYN, in *British Medical Journal*, June 12, 1897.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

The Roentgen Rays in the Diagnosis of Phthisis and Pleurisy.—BOUCHARD finds that effusions in the pleural cavity cast a dark shadow on the fluorescent screen. He was first led to use the Roentgen rays in phthisis by observing in a case of pleurisy that the apex of the lung remained dark after a clearer zone had appeared in the middle of the thorax. Percussion and auscultation demonstrated that there was consolidation at this apex. In all phthisical individuals subsequently examined the shadows of the lung lesions were seen. As a rule they correspond to what one would have expected from the physical signs. In two cases clear patches on a dark ground marked the position of cavities already determined by physical signs. In one case where the symptoms suggested incipient phthisis, although the physical signs and examination of the sputa were negative, the Roentgen rays demonstrated that one apex cast more of a shadow than the other, and a few days later tubercle bacilli appeared in the sputum, and physical signs became evident.—*Semaine Medicale*, December 9 and 23, 1896.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M.D., Assistant Physician, State Asylum for Insane,
Stockton. Cal.

The Diagnosis and Management of Syphilitic Brain Disease.—In a discussion before the New York Academy of Medicine, DR. E. C. SPITZKA considered the diagnosis between genuine melancholia, and a somewhat similar condition observed in the initial period of syphilitic dementia. In true melancholia there is mental depression uninfluenced by surroundings; in the syphilitic disease the patient is depressed, because he is unable to attend to his business, and suspects that his friends realize this. In the former insomnia is present, while in the initial period of dementia syphilitica the patient sleeps through the night, and often also during the day. The true melancholia is universally neglectful of his dress; the other is very particular about certain parts of his dress and negligent about other portions. In true melancholia the patient is seclusive, while the syphilitic is irritable and his symptoms show great variations from day to day, finally drifting into a condition in which slight but characteristic changes in the medulla oblongata are found. Dr. Spitzka thought the differential diagnosis of great importance, because proper treatment in the early stages of dementia syphilitica might bring about complete recovery. In his experience, the common error had been that of too exclusive reliance on the iodides. His own initial treatment was always with mercury, preferably by inunction. The cases of syphilitic dementia, he says, are usually over 45 years of age, and suffer from renal insufficiency. The syphilitics often contemplate suicide, but only actually commit it on the impulse, and without premeditation. Although gastric irritation is quickly produced in ordinary persons by large doses of iodide, in the cases under discussion very large quantities of the iodide are not only tolerated, but often seem to act like a charm.—*Universal Medical Journal*, April, 1897.

Cystic Degeneration in a Case of Dementia Paralytica.—DR. ROBERT NEUDÖRFFER reports a case of general paralysis in which small cysts found within the brain substance, were supposed to have been caused by the cysticercus, although doubt was entertained on account of a small vessel found within one of these cysts, which had been cut open, and on account of the absence of an embryo and hooklets. A more careful examination of the brain disclosed, however, numerous small cavities, in many of which a small vessel could be found. It was evidently the condition described by Durand-Fardel as état criblé, or the cystic degeneration of Ripping. The formation of these cysts is probably the result of enlargement of the perivascular lymph-spaces. Durand-Fardel attributed them to chronic congestion, but it is probable that interference with the flow of the lymph plays an important role. État criblé has been observed in senility, alcoholism and progressive paralysis, in all of which processes congestion occurs. Tubercular meningitis on the convexity of the brain was an unexpected discovery at the autopsy. It is a well known fact that certain diseases, espectally phthisis, influence the course of psychoses, and *vice versa*. In this case the tubercular meningitis was probably the cause of the somnolent, apathetic condition. Heubner has stated that tubercular meningitis may present the picture of a psychosis. *Arch. f. path. Anat. u. Phys. u. f. klin. Med.—Journal of Nervous and Mental Diseases*, May, 1897.

FORMULÆ.

By H. E. SANDERSON, Ph.B., M.D., Assistant Physician State Asylum for Insane, Stockton, Cal.

Sexual Neurasthenia:

Quinin. bisulphat. ------ ℈ i
Ferri subcarb. ---------- ʒ i
Strychnin. sulphat. ------ gr ss
Ext. damianæ ------- ℈ i
Ext. cinchonæ ---------- ℈ ii
Ft. capsulæ No. 20.

S.—One after each meal.—*Virginia Medical Semi-Monthly.*

Itching.—Potassii permanganat. in 1 or 2 per cent. solution. S.—Apply with brush.—*Medical Record.*

Pertussis.—MOIZARD recommends:

Pulv. benzoin.
Bismuth. salicylat. āā gm. 10.0
Quinin. sulphat. ---------- 2.0

S.—For nasal insufflation. Use five times a day.—*Medical Record.*

Nausea from Chloroform Anesthesia.—Pour vinegar on the inhaling-mask, and have it inhaled.—*International Journal of Surgery—Lancet—Clinic.*

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for May, 1897.—The deaths registered in 28 town districts of the State, during the month of May, in a population of 608,891, correspond to an annual rate of 13.44 a thousand, the total mortality having been 682. 35 deaths were due to zymotic diseases, giving an annual rate of 6.84 a thousand. Of these, 6 were due to diphtheria, 5 to cholera infantum, 7 to typhoid fever, 4 to diarrhea and dysentery, 3 to cerebro-spinal fever, 4 to whooping cough, 4 to croup, 1 to intermittent and remittent fevers, 1 to scarlet fever, 0 to measles, and 0 to small-pox. 198 deaths resulted from diseases of the respiratory organs, giving an annual rate of 3.84 a thousand. Of these, 122 were due to consumption, 49 to pneumonia, 24 to bronchitis, and 3 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.40 and .85, respectively. 88 deaths resulted from diseases of the heart, 4 from alcoholism, 0 from erysipelas, 32 from cancer, and 288 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 544,000, was 16.68. The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from Berkeley.

METEOROLOGY.

Summary for May, 1897.—*Temperature.*—The normal temperature of the State for May is 64.1°; the average for May, 1897, was 66.9°, a departure from the normal of +2.8°. The highest monthly mean was 89.0°, at Mammoth Tank; the lowest, 48.0°, at Bodie. The maximum temperature was 116°, at Volcano Springs, on the 28th. The minimum, 18°, at Bodie, on the 9th. The absolute range for the State was 98°. The greatest monthly range was 66°, at Greenville; the least, 17°, at San Diego and Port Los Angeles.

Rainfall.—The normal precipitation for the State for May is 0.89 inches; the average for May, 1897, was 0.18 inches, a departure from the normal of −0.71 inches. The greatest monthly precipitation was 2.47 inches, at Fordyce Dam; the least, nothing, at numerous places throughout the State.

Wind.—The prevailing direction of wind ranged from W.N.W.

Unusual Features.—There were no unusual meteorological phenomena for the month.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for May, 1897.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn ....Cal.	68.0	94	50	------	------	------	----	0.28	------	----	----	----	N.	Southern Pacific Company.
Berkeley......... “	60.0	91	48	68	52	16.0	1	0.20	84	14	6	11	S.W.	Obs. University of California.
Colfax........... “	67.0	93	46	------	------	------	----	0.00	------	----	----	----	N.	Southern Pacific Company.
Coronado....... “	65.0	75	55	------	------	------	5	0.12	------	15	4	12	N.W.	Hotel del Coronado.
Eureka.......... “	53.0	70	39	58	47	11.0	7	0.75	90	9	16	6	N.W.	Weather Bureau Dept. Agr.
Fresno........... “	72.0	99	45	88	56	32.0	0	0.00	45	24	7	0	N.W.	“ “ “
Keeler........... “	78.0	100	51	------	------	------	----	T	------	----	----	----	N.	“ “ “
Los Angeles.... “	63.0	76	48	71	54	17.0	3	0.10	82	2	22	7	W.	“ “ “
Monterey .... “	58.0	74	44	------	------	------	----	0.08	------	----	----	----	W.	Southern Pacific Company.
Napa............ “	65.0	98	44	78	52	26.0	1	0.25	70	16	14	1	S.	Station Napa Insane Asylum.
Oakland .... “	61.0	92	47	70	52	18.0	2	0.29	76	14	12	5	W.	Chabot Observatory.
Paso Robles.... “	62.0	88	40	74	49	25.0	0	0.00	------	23	8	0	S.W.	Agr. Experimental Station.
Red Bluff....... “	73.0	98	46	86	59	27.0	2	0.06	41	25	6	0	S.E.	Weather Bureau Dept. Agr.
Sacramento*... “	67.0	93	45	79	55	24.0	1	0.30	44	23	8	0	S.W.	“ “ “
San Bernardino “	66.0	93	43	81	50	31.0	1	0.11	------	18	10	3	W.	A. K. Johnson, M. D
San Diego....... “	61.0	67	50	64	58	6.0	5	0.12	81	15	4	12	N.W.	Weather Bureau Dept. Agr.
San Francisco.. “	57.0	88	47	64	51	13.0	2	0.61	80	13	16	2	W.	“ “ “
Santa Barbara.. “	60.0	74	46	66	53	13.0	0	0.00	79	13	8	10	W.	Hugh D. Vail.
Santa Cruz...... “	60.0	91	38	71	49	22.0	2	0.24	------	14	0	17	S.W.	W. R. Springer.
Yuma...........A. T.	80.0	102	54	96	65	31.0	0	T	------	26	5	0	---- ---	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

*Humidity at Sacramento at 5 P. M.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: JULY, 1897

THE JUBILEE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The jubilee meeting of the American Medical Association, held in Philadelphia, June 1–4, at which the Association celebrated the fiftieth year of its existence, was a most notable success. *The Journal* of the Association says "it not only surpassed all previous meetings, in number of members present, but in *tout en ensemble*," while one of our correspondents characterizes it as a "magnificent meeting, with good papers and a large attendance of first-class men." Additional interest was given to the occasion by the presence, at the meeting, of DR. N. S. DAVIS, of Chicago, the father of the Association and its founder, and of PROF. ALFRED STILLÉ, of Philadelphia, who was its first Secretary. Both of these gentlemen, while well advanced in years, are in full possession of all their faculties, and DR. DAVIS' address shows no traces of impairment in mental vigor, while those who heard him deliver it, have commented with satisfaction upon the strength of his voice and the clearness of his diction.

Those who know how dear the Association and its welfare have ever been to DR. DAVIS, will realize the profound gratification that this occasion must have afforded him. He has, at all times, stood for all that was good in the profession ; he has ever been foremost in forwarding the interests of the Association, and in supporting the highest and most honorable course. Those who believe in the reality as well as the desirability of the Code of Ethics of the American Medical Association, will recognize in DR. DAVIS, one of its staunchest supporters and friends. With the kindliest remembrance of his efforts on behalf of California, at the Milwaukee meeting, and of the hearty and earnest manner in which he advocated the claims of the Pacific coast, it seems proper, on behalf of the profession of this

State, to many of whom his name and his friendship is dear, to offer him the sincere congratulations of the profession, on the attainment of so many years of active life, and to express the hope that he may long be spared to continue, as he has ever done, his efforts on behalf medical science.

DR. N. SENN, of Chicago, made an admirable presiding officer, calling the sessions to order, promptly on time, and presiding with dignity and firmness. The complaint that has been made of our own State Society in relation to the number of papers, seems to be echoed from the Philadelphia meeting. There were many good papers, but too many for the time at the disposal of the Section meetings. It is certain that if future meetings of the Association, and of many of the State Societies are to be both profitable and interesting, the most stringent measures must be taken to put in operation the Darwinian laws of "selection" and of "the survival of the fittest."

DR. GEORGE W. STERNBERG, Surgeon-General of the Army, has been elected President; a well deserved compliment to the Service which he represents, and to his prominence as an original investigator and worker of international fame. Denver has been selected as the place of meeting for 1898, and DR. J. W. GRAHAM, of that city, is Chairman of the Committee of Arrangements.

The selection of Denver as the place of next meeting should insure the presence of a large delegation from the Pacific coast. This will be distinctively a western meeting, it is nearer home for dwellers on the Pacific coast than they are likely to find for several years to come. The occasion should, therefore, be liberally availed of. In the selection of Denver, THE MEDICAL TIMES can justly feel that its efforts to procure the meeting for San Francisco, in 1894, and, subsequently, in the face of many adverse circumstances, to promote its success, have not been in vain. Up to that time there had been but one meeting held west of the Mississippi, namely, the San Francisco meeting of 1870. The Association had refused to go to Omaha, on more than one occasion, and on several, had declined California's proffered hospitality. The meeting of 1894 may, therefore, be considered a missionary one, and it is now evidently bearing fruit.

If the Association, at the end of four short years, is willing to concede a meeting to Colorado, it is not unreasonable to expect that four or five more will see a similar honor conferred upon Omaha. The end of the present decade should see a Pacific coast city in competition, and at their present rate of growth, it is safe to say that at least three can fairly enter the field for the prize. We believe that it is for the best interests of all State and District Societies, to visit the various sections in their territory, in rotation. For similar reasons we advocate an annual migration of the Association, that it may, each succeeding year, become more truly representative of the profession of these United States.

THE COMMENCEMENTS—COLLEGE OF DENTISTRY.

The commencement exercises of the College of Dentistry, University of California, were held at Odd Fellows' Hall, on June 16th, at 8 P. M. After prayer by the REV. W. W. BOLTON, an address on behalf of the Faculty was delivered by DR. ALLEN H. SUGGETT, of Marysville. The degrees were conferred by MARTIN KELLOGG, the President of the University.

The following is the list of graduates: Julian Woods Ashley, Benjamin Avery Bosqui, Edwin Andrews Clay, Charles Alfred Coffin, Orville Mirtland Colburn, Asa Weston Collins, Medora Vaux Croall, Stephen Russell Cushing, George Samuel Donnelley, Judge Haley Durham, Edward Sewell Fiske, Howard West French, Ray Edson Gilson, Herman Pierce Hanson, Frederic William Harnden, William Merced Herrington, Theodore Shelton Higgins, William Robin Holladay, Walter Renwick Hughes, Charles Fitz Howard Jarvis, Frank D. Johnson, Paul Clinton Jones, Edmond Douglas Keeffe, Louis Joseph Kerwin, Clair Cutting Marckres, Charles Joseph McCarthy, Milton McMurry, Julius Ira Morris, James Arthur Plunkett, Thomas Hopkins Quirk, George Washington Raymond, Harry Clendenin Reynolds, Frank Oniska Robinson, Helen May Rulison, Edward Wells Russell, Fannie Elsie Scott, Edwin Matthew Stealy, Henry Stiles, Charles Maurice Sumner, George Henry Tompkins, Edward Albright Upton, Martin Wachs, Thomas Rattray Wheeler.

The total number of students in attendance during the past session was 168, the number of matriculates being 4.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, May 18, 1897.

The President, W. J. Hanna, M.D., in the Chair.

The Treatment of Typhoid Fever.—Dr. W. F. Wiard read a paper upon this subject. He said: The idea formerly held as to the significance of temperature readings in typhoid fever militated against original research and independent action. His experience had disproved the fact that a temperature of 104° F., on the second day, excludes the existence of typhoid fever. In one case he had observed a temperature of 105° on the second day, followed by a normal temperature, and yet the attack subsequently assumed all the features of typhoid He believed that the profession was no longer in the helpless position of making a diagnosis in typhoid fever, and asserting that the disease must run its course. Assuming that all are agreed as to the specific or germ origin of typhoid fever, and that the avenue of infection was usually the alimentary canal, he believed it was possible to present a rational treatment. Having discussed the general hygienic measures that should govern the treatment of typhoid fever, the speaker proceeded to contrast former methods with those which, in the light of later experience, he now advocated. He said once he would have hastened to reduce the fever, for he was taught that a continued high temperature must, necessarily, produce destructive tissue changes. Aconite or veratrum were administered for this purpose, and, later, phenacetin or other of the numerous class of worse than useless fever reducers. A somewhat extensive experience had convinced him that this course was uncalled for, and that it was bad practice—not only productive of no good results but often causing unpleasant and alarming symptoms. He had seen two grains of phenacetin given, once in 24 hours, where the temperature reached 104°, followed by a reduction of 2 degrees, and a threatening collapse. In another case seen in consultation, the same result was caused by a similar dose. He regarded the modern indications of treatment to be: First, as thoroughly as possible remove from the alimentary canal the specific germ, and at the same time rendering the canal as nearly antiseptic as possible. With this end in view he began, at the outset of the attack to administer the tablets advised by Dr. J. E. Woodbridge, known as Formula No. 1, giving them every 15 minutes, for 48 hours, and paying little attention to nutrition. There was no objection to arousing the patient from sleep for the purpose of administering the medicine. Frequent sponging of the entire surface with cool or tepid water, and copious enemata of cool saline solution were very beneficial. He insisted upon the administration of the enemas, regardless of the frequency of the stools, as they assisted in removing the deleterious matter from the lower bowel, thus preventing the retention of vitiated secretions He did not now regard a temperature of 105° in any stage of typhoid fever, without complications, as cause for special anxiety. He believed it called for the administration of the best antiseptic obtainable—preferably the Woodbridge Formula No. 1, given every 15 minutes, regardless of other conditions present. He would confidently expect a reduction of 2 or 3 degrees in the temperature in 12 hours, but would continue their administration 12 or 24 hours longer, gradually lengthening the intervals He emphatically negatived the administration of quinine in the early stages of the disease. He believed he had seen cases in which the fatality was due to the administration of medium doses of quinine, and he did not now use it except when the fever had subsided, and then in tonic doses, not to exceed one grain every four hours. Mild delirium he did not regard as requiring special medication. When severe, he would expect to control it with hydrate of chloral and bromide of potassium in 30-grain doses each, two of these being given at an interval of two hours. When improvement had been established he had found much satisfaction in the administration of euthymol or of listerine in teaspoonful doses every three or four hours. Should the Woodbridge treatment fail to abort or cut short the attack, and if the heart showed signs of weakening, he believed we had, in strychnine, the best and most reliable heart tonic, one-thirtieth of a grain being given every two, three, or four hours, as required. Digitalis and nitro-glycerine were also useful. Regarding diet in typhoid fever, he had met cases in which the generally accepted food—milk—had caused grave symptoms, both gastric and intestinal, due to the presence of undigested casein. As a rule, therefore, he did not give more than three ounces every two hours, combined with lime water, and aiding its digestion, when necessary, with papoid. For patients who objected to milk, liquid peptonoids provided an admirable substitute; he also used malted milk, Mellin's food, and beef extract, preferring Cudahy's, as being free from the unpleasant taste and odor common to other and similar preparations. Home-made beef-tea need not be discouraged, as it at least possesses the merit of harmlessness, as well as providing occupation for well-meaning friends. He believed that typhoid fever was often over-fed, and it was necessary, in this connection, to guard against the meddlesome interference of friends. In case the stools continue to be frequent, say eight or twelve in 24 hours, the indication thus offered by nature was clearly not to check them, and, therefore, cause the retention of a virulent poison. He would, therefore, resume the administration of the Woodbridge Formula No. 1, no matter what stage of looseness had occurred, for ten hours, and if unsuccessful, would then give one dose consisting of 20 minims each of deodorized tincture of opium and oil of turpentine and one ounce of castor oil. He had not infrequently observed a normal temperature follow the administration of this formula. He was aware that there had been an intense opposition to this line of treatment, and that it had been received with incredulity, while the qualifications and intentions of its author had been questioned. Medicine was conservative, but he believed we had passed the line in the treatment of typhoid fever when we stood firm and helpless before a case, and referred to our forefathers in the profession in support of the statement, that we were helpless to shorten the course of the disease or even to treat it consistently. He felt that it was a sad commentary on our intelligence, as physicians, to read in a late article on typhoid fever, the following: "It must be admitted that there is no drug or method of treatment that will arrest the course of the disease," while the author, in the same article, expressed himself to the effect that, in therapeutics generally, and especially in typhoid fever, "the best system is to have no system" There had now been too many cases aborted in the early stage to longer deny the power of medicine to accomplish this desirable end. Again, the harmlessness of the Woodbridge formula recommended its employment in cases of questionable character, where there was a possibility of error in the diagnosis, If not given until later in the disease, he would not expect it to abort the attack, but he would look for it to ameliorate the conditions and to establish convalescence from one to two weeks earlier than could be brought about by any other means of treatment. He confidently believed that, under this method, intelligently applied, intestinal hemorrhage would be exceedingly rare; that perforation of the intestines would also be of rare occurrence; that involvement of the lung would be a novelty, and death from typhoid fever only a possibility.

Dr. G. A. White: Typhoid fever is a disease dependent upon a specific poison, and the rational treatment of that disease is to administer a remedy that will destroy that poison. The strong antiseptics are useful in the destruction of bacilli in other diseases, and, therefore, typhoid fever being a disease with a bacillus is reasonably remedial by antiseptics. I am not ready to accept all that has been said for the Woodbridge treatment. Perhaps I belong to the older school of physicians who do not believe in giving up that which experience has proven to be good. In some of the cases referred to by the author, where there has been high temperature, he has dwelt upon the importance of non-reduction of temperature. I believe that a patient with a temperature of 104° or 105° will be placed in a better and more comfortable condition if the temperature is reduced two or three degrees. I remember the case he refers to, in which small doses of phenacetin and antikamnia provoked cardiac depression and colliquative sweats. The fact that that case did not respond pleasantly to that plan of treatment does not prove anything The temperature was permanently reduced by means of baths, three or four times daily. We have all read the articles by Dr. Woodbridge in the journals, and some of us heard his paper read before the American Medical Association, in San Francisco. He gives his treatment with all the fervor of an enthusiast, and he asks us to accept it without question That method of proselyting the profession has been tried before, and we have been led into the hasty adoption of new plans of treatment in a great number of diseases, and many times without benefit. Now it is not altogether certain that there is not a considerable percentage of the cases reported as remediable by the Woodbridge treatment that are cases of remittent fever, and curable by any plan of treatment, and it is not altogether certain that a very large percentage of the remainder of these are cases that would get well with the ordinary plan of baths, and the usual methods obtaining in the last twenty years. It is within fifty years that typhoid fever has been considered by the profession. It is comparatively, therefore, a new disease. Fifty years ago Louis wrote his book on fever, and shortly after that typhoid was introduced to the profession. Turpentine, calomel, carbolic acid, and iodine are remedies well known to the profession as antiseptics, and generally used for 25 years past. We have considered that typhoid fever is a self-limiting disease, covering a period of three weeks. In malarial climates, such as this, it is more likely to extend five or six weeks. In this climate I believe quinine is very advantageous in the treatment of typhoid fever, and therefore I do not hesitate to administer it where there is periodicity. It is essential to keep the digestive apparatus in the best possible condition in order to treat this disease successfully. Hydrochloric acid is one of the best medicines we have to preserve the normal acidity of the stomach.

Dr. J. H. Parkinson: Personally I have no experience with the Woodbridge treatment, and do not expect to try it until its efficacy has been better assured. There have been quite a number of cases reported in which this treatment has been used. I think that, as Dr. White has just said, many of these cases were not typhoid fever at all. The history of many of them seem to show that. If they are cases of typhoid, it is a type we do not see here. Dr. Woodbridge's original publication, and two or three of his subsequent papers, were certainly not of a character to impress me favorably His very radical departure in diet is not sound; from a pathological standpoint the pathology of typhoid has not changed, nor has its morbid anatomy. I think, therefore, until we have some further light upon the subject, we had better leave it alone. I notice, quite lately, in the report of the Committee on Clinical Medicine of the State Society, Dr. Fife mentions that Dr. Woodbridge, when, in New York, had charge of a series of cases at Bellevue. Two of these died—two out of eight. As regards the administration of phenacetin in typhoid, I use it freely, and I do not think that the doctor's argument against it, based upon an unpleasant experience in one case is sound. His patient had evidently a marked idiosyncrasy for that particular class of remedy. I have seen acetanilid and antipyrin followed by unpleasant symptoms. I should not feel inclined to drop the drug in all other cases simply because I met with a mishap in one.

Dr. H. W. Strader: I have never used the Woodbridge treatment. I will follow my present plan, so long as it gives me the results that it has in the past. I use carbonate of guaiacol, hydro-napthol, and mild chloride of mercury. With these remedies I succeed in getting a reasonably aseptic condition of the bowels. I pay little attention to the temperature. When it reaches 100° I give phenacetin. I use, generally, about 7½ grains to 10 for an adult. I have given 7½ grains every four hours for two or three weeks, in several cases, and the great advantage is that you have no delirium. When you go to see your patient he can talk rational, and the general feeling of the patient is so much better that I feel justified in using it. I pay little attention to a weak pulse. When the pulse is weak I give phenacetin just the same. I have not used quinine in the treatment of typhoid in ten years, and I never expect to use it again. I am satisfied it kills patients in typhoid, for the reason that quinine is an irritant, and should not be given in ulcerated conditions of the bowels. Without its use you do not have that soreness of the bowels you so often have. Two years ago, in a case of typhoid fever, the patient begged me to let him eat potatoes and toast. I let him do so, and immediately after eating gave him a tablespoonful of extract of malt, and the case went on to good recovery. As regards the general line of diet, I am of the same opinion as the author of the paper.

Dr. T. A. Snider: There are two or three important points in the treatment of typhoid fever: Antisepsis of the bowels, control of the temperature, and the diet of the patient. Maintain the strength by proper diet. I have pursued the antiseptic treatment for years in the early stages of typhoid fever, and still do so. In the early treatment I use quinine, and it should be given in every case, in this climate especially. I think that, in this climate, we have more or less malaria mixed up with every case of typhoid fever. I think if you get the bowels in thoroughly antiseptic condition and clean them out thoroughly in the beginning, and then watch the temperature, you will generally have good results. I generally use some of the coal-tar products, with tincture of digitalis. You can reduce temperature in the course of an hour with small doses of amonol. It is less depressing than antikamnia. By small doses, with digitalis, you can reduce temperature from two to three degrees. I believe in the use of strychnine, in minute doses, throughout the treatment of the case. With regard to diet, I allow anything likely to digest, as preparations of beef, milk, and the whites of eggs. I find that the whites of eggs are very readily digested and assimilated when beaten up with ice-water and a little lemon juice. I allow my patients to use the fresh fruit juice of oranges or strawberries I have a patient under treatment now who takes a tumblerful of the pressed juice of strawberries every day. I rarely give opium to arrest the discharges Keep the bowels thoroughly antiseptic, and the discharge will cease. Of antiseptics, I may mention sulpho-carbolate of zinc, guaiacol, and arseniate of copper in minute doses. The latter is supposed to have some direct effect upon the diseased glands, and I consider it one of the best.

Dr. F. B. Sutliff: I have used the Woodbridge treatment in one or two cases. I do not think I gave the capsules every fifteen minutes. I thought it was about time to quit when the bowels began running off. I did not use the formula as prepared by Parke, Davis & Co., but a prescription compounded by a local pharmacist. I do not know how many I gave in each case; after the bowels were well moved I stopped. As regards phenacetin, I used to give it. I give it yet with more assurance, and I have not seen an untoward symptom follow. I have seen patients in the most terrible condition made so much more comfortable, that if I were the patient and were not given it, I would change physicians. I believe in reducing the temperature with baths or phenacetin; when I give phenacetin I do not give baths. I do not consider milk a liquid food. I consider it a solid one, and when I find a patient who protests against it I do not give it. To-day I was asked if a patient could have some cherries. I said the patient could have the juice squeezed out. I think we have been too strict as to what patients must take.

Dr. H. H. Look: Dr. Wiard is quite enthusiastic over the Woodbridge treatment. I am ready at all times to accept something new that will cut short or abort or benefit a typhoid fever case. I have not as yet tried the Woodbridge treatment, but I have been looking up the literature on the subject. I do not like, however, this giving medicine to your patient every 15 minutes; that is one of the objectionable features of the treatment. Another objectionable feature is the aggravation of the diarrhea that accompanies typhoid fever. These two features have kept me from using the treatment. I am not at all pleased with the old methods spoken of to-night, and considered good My patients get well, of course; they would be likely to get well without any treatment. I do not consider that I do a typhoid fever patient any good except by ameliorating the distressing and disagreeable symptoms. You do not cut the fever short; in fact, you do nothing but render your patient comfortable and pilot him over the serious part of the disease. To be satisfied with that form of treatment, I could never be. The Woodbridge treatment is a step in the right direction It is an antiseptic method, and most reasonable in these cases; but, so far, it has not fulfilled its promises. Many of the cases that are said to have been cured by this treatment, as has been said to-night, are questionable. It has, probably, ameliorated the symptoms somewhat. Those 8 fatal cases in the Bellevue Hospital signify nothing, as those cases might have been fatal from the beginning and no method would have cured them.

Dr. H. D'Arcy Power: Dr. Wiard, in his essay, has assumed a tone of confident dogmatism that is out of place in the treatment of a scientific problem and on the main point, I beg to join issue. I do not think we sit down helpless, as stated, in cases of typhoid, nor do I think that the treatment of the average physician is unscientific. On the contrary, when faced by competent men it is a success. I am quite unable to see that the claims made for the Woodbridge treatment are justified either by theory or by results. I have to take exception to a number of things stated here. I do not think that high temperature is an unimportant matter, as it reduces the patient's strength, and is likely to result fatally if not checked. If the temperature rises above a certain point I think it is proper that it should be reduced in order that your patient may not be burned up I do not consider that diarrhea is unimportant. It is the duty of the physician to control it. Diarrhea is not a conservative process to get rid of germs. When diarrhea is becoming dangerous I check it with opium, bismuth, etc., nor do I think that the pouring of beef-tea into your patient is a scientific procedure. Any one who has watched the action of beef-tea must know it often produces diarrhea, and for that reason I am cautious about using it in typhoid fever. On all these points I am at issue with the author. As far as the use of quinine is concerned, I think it is allowable, especially where malaria is prevalent. I do not believe it is a direct irritant to Peyer's patches. I think it is all absorbed before it reaches there. In regard to diet, my old method was to use milk and in order to make pervious curd I add a certain amount of bottled arrowroot. Lately, I have come to feel like some of the other speakers, as regards diet. I have used eggs, meat juice, maltine, etc. In regard to the coal-tar products, I have not used them because I have found that, with the ice cap, you can reduce delirium, and with sponging and free irrigation into the intestine you can control fever. When Dr. Wiard tells us that he uses plenty of cold water in the rectum along with the Woodbridge treatment, I would like to ask how much is due to the cold water and how much to the Woodbridge treatment? I believe in antisepsis of the bowel, not because of its effect upon typhoid fever, but because it prevents fermentation going on in the intestine. I think that, from all the evidence we have, it is demonstrated that no methods are sufficient to destroy the bacillus *in situ*. I therefore contend, that the physician who is acquainted with the pathology and probable development of typhoid fever, who knows that a potent antitoxine is being generated in the system, and with foresight and therapeutical knowledge, fights intercurrent dangers until that antitoxine shall do its work, is adopting a strictly scientific attitude and procedure. much more so than he who uses an empirical remedy whose action he cannot explain.

DR. H. L. NICHOLS: From his standpoint, Dr. Wiard has made a most excellent showing, and seems to have come out triumphant. Genuine typhoid fever is a disease that requires patience and skill to treat it successfully. I used to be quite familiar with it forty years ago, in New England. The treatment was not so very different from that suggested by Dr. Wiard. Calomel was given a few grains every four hours, combined with Dover powder, and followed with cathartics. The doctor has evidently had many cases of what he calls typhoid fever, and I infer, from the discussion by other members, that they have had many. If such is the case, we must have had, within the past year, several hundred cases of typhoid fever. Typhoid fever, as a rule, means a large percentage of fatal cases. In this city of 30,000 inhabitants, in the last eighteen months, we have had two deaths from typhoid fever. I think that many of the cases reported, and so successfully treated, are not typhoid fever, but simply continued fever. without the true symptoms of typhoid. When I first came to California, at which time the people were using water from surface wells, and were living in a rough way, we had a good many cases of typhoid fever. I have, within the past ten years, had quite a number of cases of continued fever, but must confess I have not seen a typical case of typhoid in the last five years originating in this city. I have nothing to criticize in regard to the treatment offered by the doctor, but I feel that many physicians are treating cases which they call typhoid fever that are not such.

DR. A. M. HENDERSON: The paper is based on experience in private practice, whereas my experience is limited, and is such as has been obtained from institutions, in all of which the bath treatment has been used. The bath not only serves the purpose of reducing temperature, but has also a beneficial stimulating effect on the nervous system. I can not agree with the author that the

Woodbridge is the only scientific and systematic treatment. The line of action of the bath treatment is definite, the results desired are obtained, at least in a considerable measure, and the treatment has still the endorsement of a large part of the scientific men of the world. In several of these institutions the coal tar products have been used as an adjunct to the bath treatment. In private practice treatment with the coal tar products has the unqualified endorsement of many eminent men, and there are many others who substitute it for the bath, because of the difficulty of using the latter. Dr. Page, of New York, who has observed the treatment of typhoid for many years, says he has seen many panaceas come and go, but his advice is to treat as little as possible The typhoid bacilli are found in the spleen, liver, and other viscera, and I hardly expect we will get a sufficient general antiseptic effect to justify the claims of the Woodbridge treatment for antisepsis. I should rather hope for favorable results from a typhoid antitoxic serum.

DR. SUTLIFF: If the bacilli are found elsewhere than in the intestine, as in the spleen, etc., why not give acetanilid for its general antiseptic effect?

DR POWER: If you consider the maximum dose, you can give, 10 grains, and see if it will have any effect upon the bacillus in the spleen. I think the question of the last speaker will be answered.

DR. L. A. HARCOURT: In my judgment the Woodbridge treatment claims too much; it is too precise; too mathematical in its methods, and too positive, too absolute in its alleged results. It assumes that the disease is a determinate entity, and should almost invariably be treated by a mathematical formula, regardless of the age, sex or condition of the patient. This is dangerous doctrine. It substitutes formula for judgment, dogma for knowledge, and an inflexible rule of action for prudence, watchfulness and care. Such dogmatism is not justified by existing knowledge of the disease, or by the results of any method of treatment, and can only serve to clog the wheels of progress. It also assumes that no patient need die of typhoid fever. Both assumptions are untenable and dangerous. They lull the physician into false security, and prevent that eternal vigilance which is the price of recovery. It also relieves the physician from just responsibility; for if he must treat the patient by rule, instead of by judgment, he ought not to be held responsible for results. Against the ingredients in the formula I have nothing to say. They are all good in their way, but not better than a score of others, tested by experience. If, as Dr. Wiard says, calomel is the very best antiseptic, it seems illogical to lessen its efficacy by combining it with others of less power. It is difficult to improve upon the best. Antipyretics may be safely used to lower temperature, but water, by bathing, sponging, or pack, is preferable where practicable. The treatment of typhoid fever may be epitomized in two words: good care. This involves good sanitary conditions, absolute cleanliness, rest, pure water, pure food, intelligent nursing, and as little medicine as possible. The administration of medicine every fifteen minutes, as required by Dr. Woodbridge, precludes the possibility of rest, and rest in every lesion is nine-tenths of cure.

DR. THOS. ROSS: No one system of treatment is suitable for all cases. You have your patient before you and you must treat your case in accordance with your knowledge of the disease and the indications that the patient presents. I must say that I do not consider the antiseptic treatment of typhoid fever to be dogmatic I think if you accept, as a demonstrated fact, that typhoid fever is a specific disease, and caused by a specific germ, that its scientific treatment would be to adopt measures that are calculated to destroy that germ. If it is a fact that the combination of antiseptics that is to be had in Dr. Woodbridge's treatment will do that; if, as he claims, when given early, it will arrest the disease, then we can arrest the destruction of tissue that the bacillus of typhoid fever causes; and you cannot expect to have the pathological lesions of typhoid fever. I think that the antiseptic is the scientific treatment of typhoid fever. The hydropathic treatment has a great number of supporters, and no doubt the mortality has been reduced by it. All physicians who use it do not depend on it entirely. The proper regulation of the diet, good nursing, and the administration of tonics, especially quinine and hydrochloric acid, are very essential. Some objection has been made against the use of milk. I use it continuously in typhoid fever, and I consider it the best nutrient we have. The fact that milk is occasionally rejected coagulated, is no objection, as this is the first process in its digestion As long as you give milk and do not find any undigested caseine in the evacuations, it is assimilated; if you do find caseine in the stools, it is not digested; it acts as an irritant, and is apt to cause diarrhea. I object to the use of potatoes, toast, and cherries in typhoid fever. I once had a patient convalescent from typhoid fever, who ate apple pie, and died from peritonitis from perforation As to the statement that we have no genuine typhoid fever in this country, and that to have it you must have certain characteristic symptoms, as fever, tympanites, diarrhea, abdominal tenderness, enlargement of the spleen, and the characteristic eruption—in fact, a perfect picture of the disease—now, why expect so much more in making a diagnosis in typhoid fever than we do in other diseases? I am satisfied that we have typical cases of typhoid in this country, having seen many of them

DR. WIARD: I have always questioned whether it was proper for a body of medical men like this to question a member's diagnosis, and when you tell members that they do not know what typhoid fever is you are assuming too much. Of course we shall not know until we get into the great unknown, if, indeed, we do then, just what any of us have accomplished by medication. If, in a family where a patient has died of typhoid fever, the disease has run its regular course, there has been high temperature, nose-bleed, tympanites, loose bowels, and delirium, another is taken down in the same manner and the medical man comes in with any kind of treatment, whether the Woodbridge, or anything else, and prevents the occurrence of these symptoms, is it unreasonable to regard this last case as one of *aborted* typhoid? In regard to the Woodbridge treatment, I have had considerable experience with it, and I have some records which are very satisfactory. I have not lost a case since using it. Of course when we get high fever, tympanites, nose-bleed, and delirium and loose bowels, we know we have typhoid; but if you get a case of this kind, by giving the Woodbridge tablets you may confidently expect to *prevent* the aggravation of these symptoms. I believe I have done this. I have had a case which was seen by some of the members of this Society, a young lady in her first pregnancy, who was taken down with typhoid fever at about the fifth month, and, under the old treatment, she died; she might have died under the new. I have since had a similar case, the woman being taken down about the fourth month. I adopted the Woodbridge treatment. Dr. O'Connor was there and he agreed with me in the diagnosis. The main treatment I gave was the Woodbridge No. 1, and the effect was very apparent. The woman did not miscarry, but began immediately to improve, and left the hospital the twelfth day. I am glad that you all agree with me as regards antisepsis of the alimentary canal being the main thing. If not Woodbridge's treatment, it is iodine and carbolic acid, salol or calomel. It seems to me we ought to have some intelligent conclusion regarding this matter. Of course I have seen patients die in spite of everything and I was ashamed that I could not do anything to prevent it. If I have a man with the abdomen much distended, a cracked tongue, delirium, with a temperature of 105°, it worries me. I expect to have, under the Woodbridge treatment, a soft tongue and not so much looseness of the bowels. It is not necessary to resort to phenacetin to bring down temperature; it will come down gradually under the Woodbridge treatment and your patient will get better. You will avoid the tympanitic condition and delirium, and in three or four days your patient will get hungry and want to eat.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, May 11, 1897.

The President, F. B. CARPENTER, M.D., in the Chair.

New Members.—NATHALIE SELLING, M.D., LOUISE B. DEAL, M.D., MARY A. SPERRY, M.D., MARY J. SANKEY, M D, E. O. JELLINCK, M.D., W. W. FREDERICK, M.D., CHAS. S. MANN, M.D., JOHN H. PHILIP, M.D.

DR. H. KREUTZMANN reported a case of "Fibro-Myoma Complicating Pregnancy."

DR. HENRY GIBBONS, JR: In connection with this case I shall speak of one point: controlling of hemorrhage. Under general circumstances, such as placenta previa, I have always had the greatest confidence in the use of the alum plug. I have never seen any harm come from it, and it can be said to be free from the chances attendant on intrauterine injections A piece of alum about the size of a pullet's egg, with or without a string attached, is best. The hemorrhage ceases at once. The plug acts as a foreign body, and contractions occur; the mouths of the vessels are closed, no absorption takes place, and the large and firm clot can be washed away later. I have used it in very severe cases, and with the best results.

Dr. Kreutzmann: I put just as much faith in a tampon of iodoform gauze as Dr. Gibbons does in the alum plug. I have never used the latter as I have always felt perfectly sure of the result with the tampon.

Hydatids of the Liver in a Child Seven Years Old.—Dr. W. F. Cheney reported this case and exhibited the specimen. He said: The patient came under my observation at the Clinic of Cooper Medical College. He seemed to be well nourished, and there were no symptoms pointing to any particular affection. There was some pain in the right side, and about a week before, vomiting occurred. Two years ago the mother had noticed an enlargement on the right side, which had increased somewhat in size. On examination, a mass, apparently extending from the lower border of the ribs to the anterior spine to the ilium, and moving, on inspiration, could be seen. It was solid except at one point, about three inches below the ribs, smooth on its surface and apparently tender. There was dulness over the entire area, except the lower two or three inches; this dulness became continuous with that of the liver above. It extended to the axilla and to the median line in front. The heart, lungs, and kidneys were normal. With the assistance of Dr. Albert Abrams, the X-ray was employed. The upper border came out very clearly, but that portion of the abdominal cavity showed as an indistinct mass. A hypodermic needle passed into the fluctuating point enabled a syringeful of thin fluid to be withdrawn In this fluid, pus cells were found, but no hooklets The diagnosis seemed to lie between malignant disease of the liver, abscess, or hydatid cyst. All the symptoms of an abscess were present except fever. Some who saw the case thought it was a pyelonephrosis, but all agreed that an exploratory incision should be made. This was done by Dr. Rixford, of the Lane Hospital. The liver was stitched to the outside near the point of fluctuation. In three days the tumor was incised. A turbid fluid with numerous daughter cysts was evacuated and the cyst wall, as well as another cyst, was removed. Good drainage was secured and the child is now up and about. The original cyst had undergone degeneration, which explained the presence of pus cells. The literature on this subject is not voluminous. Out of 61 cases reported by Holt, only 1 occurred in a child. Musser states that, from all sources, only 31 cases occurred in children under 10 years of age. The evolution of these hydatids in the human body is interesting Their choice is, by preference, the dog. Through fondling these animals, the human being is infected by means of eggs which passing into the stomach, have their coverings dissolved and the scolex gets directly into the portal circulation, to the liver, or, ultimately, to the brain, kidneys, or bones. The egg then develops into a cyst, the entire surface of which contains little buds forming the daughter cysts. Outside of this cyst wall is the connective tissue of whatever organ it happens to be in.

Dr. J. Rosenstirn: Dr. Cheney did not mention inflation of the colon with air, as a means of differentiating between tumors of the liver and kidney. It is certainly a most valuable method, and can be readily done. The transverse colon would be in front of the tumor and would yield a tympanitic note if the tumor were of the kidney, while if the tumor were of the liver, it would be in front, and dulness would be found. The absence or presence of urea in the fluid withdrawn would also be a valuable means of diagnosis between liver diseases and hydronephrosis. In such a small quantity of fluid as that taken in the hypodermic syringe we need not be surprised at not finding hooklets, as these sink to the bottom of the cyst. To be sure of the diagnosis, a large amount of fluid should be withdrawn. The excellent result in this case is, no doubt, due to the method of operation.

Dr. F. Fehleisen: I have had considerable experience in these cases in the clinics of Europe, where they are more common, and I am surprised that they are so rare here. In regard to differential diagnosis, insufflation of the colon is valuable, but in some cases the colon is pushed down and, therefore, by this means the diagnosis would not be rendered easier. If hooklets cannot be found in the fluid withdrawn, it is of importance to ascertain the presence of chloride of sodium. This can be found in a very small amount of fluid.

DR. HENRY GIBBONS: In Australia this disease is very common, the usual source being the sheep. Surgical procedures there are very frequently called for. Cysts have often been found in, and removed from, the brain.

DR. G. W DAVIS: In connection with prevention, we know that this disease is most frequently contracted from dogs, and when we know that other diseases are carried by them, we can readily see how very important it is to be careful of them. In Iceland this disease is quite common. The people there live and sleep with their dogs. There is no doubt in my mind that a dog was the cause of this case, as Italians are very fond of dogs.

DR. C. G. KUHLMAN: As Dr. Davis says, this disease is very common in Iceland—about one in six suffering from it. I agree with Dr. Rosenstirn that Dr. Cheney did not remove sufficient fluid to make a thorough examination, but I do not agree with the author that the hooklets would have settled to the bottom of the cyst. If the fluid as well as the patient had been well shaken up, a large trocar could be used. I have tapped the liver fifteen times in one case, with no bad result.

DR. E. E. KELLY: I saw a case that was of great interest to me. The physician in attendance thought that a right-sided empyema was present, as the dulness was high up on the side. On aspiration, some cloudy fluid was withdrawn, and an attempt made to wash out the pleural cavity with boracic acid solution. A quart was used, but none of it returned, and in two or three hours the patient afforded us an opportunity of ascertaining why it had not done so. There was a large cyst in the liver, pushed high up, and in making the ordinary chest puncture, this was entered. The reason no fluid returned was, that the cyst wall acted as a valve, allowing the fluid to enter, but preventing it from escaping.

DR. BLUE, U. S. N.: Two years ago there was a case at the Marine Hospital, which was only diagnosed *post-mortem*. The walls of the cyst were very thick and there were a great number of daughter cysts, with a quart or two of fluid.

DR. CHENEY, in replying, said: The colon, no doubt, should have been inflated, but this was not done. The fluid withdrawn was examined chemically, and some crystals, supposed to be nitrate of urea, were found, so pyonephrosis was thought of. More fluid might have been withdrawn, but when we found pus cells we supposed we had an abscess. If the fluid had been clearer, and rich in chloride of sodium, as mentioned by Dr. Fehleisen, we would have suspected echinococcus. Dr. Davis' remarks are good. The dog often licks his anus, and then the child kisses and fondles the dog, thus laying itself open to infection. In this case the diagnosis was made *ante-mortem*, which, I observe, was not the case with others that have been reported here to-night.

Ovarian Cyst—Removal of Uterus and Tubes by Enucleation.—DR. J. COPLIN STINSON reported this case and exhibited several of the specimens. The speaker reported two cases illustrative of this operation, which he believed he had done for the first time, in December of last year. He believed that the common experience amongst operators of finding that, after the removal of an irreparably diseased appendage or appendages, the patient was not cured, was due to the universal custom of ligating the pedicle *en masse*, instead of tying it off in sections. In the enucleation method with ligature of the vessels only, the procedure is safe, simple, and scientific, and will not be followed by any of these untoward symptoms. There are two points involved in conducting this operation: (1) To dissect as close to the mass as possible. (2) To keep the field of work well in view, and if an artery be divided to catch it at once with the forceps and ligate separately, with fine catgut or other absorbable material. The speaker, in reporting his second case, which was one of total extirpation of the uterus and tubes, for puerperal fever, following difficult labor, with artificial delivery, and a fetus that had been dead some time, said: "This is the first case wherein vaginal hysterectomy has been performed by enucleation, with ligation of vessels only, for puerperal metritis, intramural abscess, etc. For this reason, and from the fact that vaginal hysterectomy is of sufficiently rare occurrence, I have reported the case." The patient had survived the operation about 18 hours.

Dr. W. F. Cheney: In this last case I feel strongly that a conservative plan should have been tried longer. There was no reason why pus could not have run down into the uterus and escaped. Dr. Stinson says he curetted the patient when he delivered her. Now, if everything had come away there was no need of so doing, and the infection would only have been carried deeper.

Dr. G. W. Davis: I must protest against this operation. We should exhaust every expedient before we resort to such a procedure. If I understand the case correctly, I certainly do not think I would have operated upon it.

Dr. H. Kreutzmann: Dr. Stinson claims priority in this method of enucleating these tumors, to which he is not entitled. To remove any tumor of the ovaries or tubes, whether neoplastic or inflammatory, it is necessary to enucleate it—to shell it out, when it is imbedded in the surrounding tissue. This has always been done and is being done by everybody who does this kind of work. With the enucleation, a pedicle is formed and this has to be treated. If the tumor has no pedicle, like the parovian cysts, the treatment of the pedicle is not necessary. The pedicle is the layer in which the blood vessels run. The usual method of treating the pedicle is to ligate it and drop it. The surgical treatment advocated, especially by Doyer, of Rheims, is to ligate the blood vessels only. A very important feature is the covering of every denuded area with peritoneum. Last year, in a paper that appeared in the *American Journal of Obstetrics*, I advocated what I call retroperitoneal treatment of the pedicle. The doctor has implied drainage through the abdominal incision. I have discarded drainage in these cases almost entirely. If all bleeding is arrested and the raw surfaces covered with peritoneum, drainage is only harmful, as the opening left may cause a hernia. When the field of operation has been soiled or the parts mutilated, I drain through the vagina. As for the case of hysterectomy for puerperal septicemia, if the system had already been infected, surgical treatment, such as curetting or removal of the uterus was of no advantage, as in most septic cases no local manifestations of septicemia is present.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, June 19, 1897.

Wm. Watt Kerr, M.D., in the Chair.

Purpura Following the Administration of Quinine.—Dr. D. W. Montgomery reported a case of purpura and bleeding of the gums from the administration of quinine. The patient gave a history of having at one time taken large doses of quinine with only a few disagreeable symptoms, then of having taken some time afterwards a 10-grain dose of quinine, which was followed by moderate purpura of the skin and free bleeding of the gums. This bleeding of the gums was attributed by the patient to the injury caused by the extraction of a tooth, which, of course, would not explain the purpura of the skin. When called to see the patient he had again a moderate purpura, and a free oozing of blood from the gums. On questioning it transpired he had taken a 5-grain dose of quinine the night before.

Dr. A. E. Regensburger: I have been greatly interested in this subject for years. It appeals to me in the capacity of dermatologist and medical jurist. We know that certain drugs, for example, quinine, chloral hydrate, etc., give rise to peculiar manifestations. This was not a "bleeder," although the history is not reliable in cases of this kind. Two years ago I cut a stricture and sent the patient home. I was summoned later, and the patient was almost pulseless from bleeding. The patient positively denied tendency towards bleeding until after the operation, when he recollected that he had an alarming hemorrhage after extraction of a tooth some years before. Crocker rightly claims that idiosyncrasy is at the bottom of these untoward manifestations of drug poisons. The best work on drug poisons is that of Prince Morrow.

Dr. H. M. Sherman: This history of quinine poisoning gives us warning. I once saw a case of Dr. Murdock's where quinine caused faintness, difficult breathing, etc., when administered by the mouth, but no disagreeable effect when given hypodermically or by the rectum. This led to the observation that quinine acted through the pneumogastric.

DR. G. CAGLIERI: These cases are interesting while we are in doubt of their pathogenesis. Bintz says that quinine in small doses increases the number of red corpuscles and the amount of hemoglobin, in large doses it diminishes the number of corpuscles and hemoglobin. Now as we have purpuric spots after typhoid, rheumatism, etc., perhaps this case was due to the anemia caused by the quinine.

DR. MONTGOMERY: There was no change in the blood in this case; no anemia.

DR. W. WATT KERR: The susceptibility to quinine varies with the patient's age, surroundings, etc. A patient who once took 60 grains in a dose is now unable to take 5 grains without distress. In another case 1 grain of quinine produces violent urticaria.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, June 7, 1897.

G. F. HANSON, M.D., in the Chair.

New Member.—L. A. KENGLA, M.D., was duly elected a member of the Society.

Restoration of Sphincter Ani.—DR. EMMET RIXFORD presented the case of a man aged 30 years, suffering from rectal incontinence. He could control neither gas nor feces. A fistula 2 inches long opened into the rectum, and another of about the same length ran downwards into the scrotum The latter was freely opened, scraped, scrubbed out with a scrubbing-brush and lysol solution, closed with sutures and sealed with lax benzoin compound. The upper fistula was entirely dissected out. The mucous membrane of the rectum was closed with catgut. The skin wound was closed with silk. No attempt was made to coaptate the ends of the sphincter externus, the parts being merely placed in opposition. Perfect restoration of function was obtained.

DR. R. L. RIGDON read a paper on "Operations for the Relief of Prostatic Hypertrophy," a difficult field of operative surgery.

DR. HENRY GIBBONS, JR: I have seen the statement, somewhere that if the utriculus were the part enlarged, that castration was followed by a good result; whereas, if the lateral lobes were at fault, it was of no benefit. I would like to ask if this is so.

DR. C. N. ELLINWOOD: The establishment of an artificial urethra is sometimes of benefit. A short time ago I saw a case, old and debilitated, whose catheter life covered a period of several years. Lately the catheter had to be introduced every 15 minutes—this period being the maximum length of sleep for several months. Suprapubic cystotomy was performed, and a large stone removed. The stone was soft on the outside—several trials before the operation had failed to detect it. The prostate was hypertrophied in both lateral and median lobes. The contractile power of the bladder seemed nearly absent. No perineal incision was made. A syphon drain was kept up for two weeks. Then an obturator, fastened to a shield, which latter was secured with tapes around the loins, was introduced. This at first was irritating, but after a time it was well tolerated. Two weeks ago the bladder would hold urine three hours, and had so far recovered its contractility that the man could, after removing the obturator, throw the stream about two feet distant—no catheter being used. Of course the operation was only palliative. Another case had lived through a catheter life of 12 years, when, finally, retention came on. The diagnosis made was abscess of the prostate. A large perineal incision was made, and a large part of the enlarged prostate shelled out with the finger. During the manipulation the prostatic urethra was opened. The patient did well for three days, then suddenly an alarming hemorrhage began, which caused much trouble and anxiety for five or six days. He recovered, and in about two and a half months used his catheter with comparative comfort. He is now about 70 years of age and is fairly comfortable. He uses the catheter without difficulty once in two and a half hours.

DR. L. C. LANE: In my practice, the treatment of enlarged prostate has gone through many changes. Forty years ago my friend's paper would have been considered a discourse on the wildest things that could be done on the living human body. In Dittel's clinic, a number of years ago, I saw a ward full of his patients operated upon for enlarged prostate. He taught rest for the bladder, merely introducing a trocar into the bladder, and maintaining drainage for a month. Thirty years ago it was advised to introduce fluid extract of ergot or tincture of iodine into the rectum. I did this at that time. It is a method that ought to receive more attention. Massage of the prostate with a sound in the bladder and a speculum in the rectum, I have also used in a few cases, but only one of them improved. The method is tedious and not satisfactory. Removal of the prostate after preliminary exsection of the coccyx I have done in one case. It is extremely difficult, far more so than would be imagined. The wound is narrow and very deep, with the prostate at the bottom. It is almost impossible to keep the field of operation even reasonably clear. In the case operated upon, death resulted in a short time, without benefit by the operation. Removal of the prostate by the suprapubic route is a promising operation—although, as the doctor has shown, it does not always turn out well. A few months ago an old man came to me, suffering with enlarged prostate. This old man had delusions. He was operated upon by the suprapubic route and a large median lobe removed. Siphon drainage worked fairly well. During the third or fourth week his mental state became worse, and finally acute mania set in, which was soon followed by death. Chronic, long-standing diseases of the bladder tends to insanity. The worry, trouble and loss of sleep, all favor a disturbed mental condition. One of my most satisfactory cases was operated upon by the combined method of suprapubic incision and perineal drainage. It was tedious, but a good result was obtained, the man retaining control of the urine In Langenbeck's *Archives*, a short time ago, some one reported a series of 70 or 80 cases of stone operated upon by the suprapubic method Drainage was obtained by keeping the patient face downward—all of them recovered.

DR. RIGDON: In reply to Dr. Gibbons, all that I can say is, that the subject is not at all clear.

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

Seventh Semi-annual Meeting held at Auburn, March 9, 1897.

The seventh semi-annual meeting of the California Northern District Medical Society was held in Arthur's Hall, the Society being called to order by the President, JOHN FIFE, of Red Bluff.

Addresses of Welcome.—On behalf of MAYOR MORGAN, of Auburn, ATTORNEY WRIGHT said: I extend to you gentlemen a very hearty welcome. We are pleased to have you with us, and appreciate the fact that you have selected this little burg in which to hold your meeting. The prosperity of this town is largely owing to its latitude and climate. This has been brought about in a great measure by the members of your profession in recommending patients here to regain their health, many of whom have remained with us permanently. We appreciate the strong bond of sympathy that exists between the members of the profession and the people in this little village, and therefore, on behalf of Mr. Morgan and the council of this city, I extend to you the freedom of the city.

SUPERVISOR KENISON said: *Gentlemen:* It affords me great pleasure to be here this afternoon. We are glad to have you with us, and hope that your short stay will be so pleasant that you will want to return again in future. I thank you gentlemen for the privilege.

DR. R. F. ROONEY, of Auburn, Chairman of the Committee of Arrangements, said: *Mr. President and Members of the California Northern District Medical Society:* Nothing could possibly give us more pleasure than to welcome you upon this, your first, visit to our little gateway city. On behalf of the Placer County Medical Society, and of the profession throughout the county, I cordially greet you, and extend a most sincere and hearty welcome. Your attendance here is very gratifying to us, and does us an honor which we appreciate. It also shows your genuine interest in your chosen profession, and your loyalty to it. The loss of both time and money, necessitated by your presence with us to-day, is no inconsiderable burden in these times of monetary depression; and

I am amazed that, under the circumstances, such an attendance is present. As the years pass by medical men are realizing, more and more, the benefit—aye, the necessity—to be derived from binding themselves together by means of medical societies. The friction of one mind against another; the begetting of a brotherly feeling by friendly intercourse; the renewal of estrangements; the sharing of our professional burthens; all these go to make us better men and abler physicians. The most humble and unostentatious member of any society has something stored up, that, if shared with his brethren, would prove of interest and benefit to all. It is in the end, therefore, no real loss to us to give an occasional day to our Society. To be sure, the profession is becoming so crowded that one will soon have to nurse his practice as carefully as he would a failing patient, but he will never lose by his absence whilst at his society meeting. It is perfectly appalling to see the rate at which medical colleges are grinding out their grist of doctors to-day. There are now four full-fledged mills at work in California, in the regular profession, and two others outside. The combined grist of these six mills must be in the neighborhood of 200 new doctors annually. And this in a State containing about 2,000,000 of people. This is a perfectly absurd condition of affairs, especially when taken in conjunction with the fact that there is little room for overflow. The supply is nearly as excessive, over demand, in all the other States and Territories as it is in our own. I sincerely pity one-half of the young physicians who are being graduated to-day. With one half of them their money and their time has been wasted in acquiring a profession. Over one-half of these men must live by indirect means, by downright dishonesty, or else drop out of the profession entirely—or starve to death. To us older men, whose battles are nearing a conclusion, this is not so serious a matter, but to the young men, whose professional lines lie ahead of them, it is a matter for grave consideration. I fear that the spirit of quackery, shown by a desire of notoriety through indirect forms of advertising, leads to the formation of many of these medical schools. Some men think it a fine thing to be referred to as Dr. Know-it-all, Cure-em-Quick, Professor of Urinalysis in the John Jones College of Medicine. These men must be working for their own selfish ends. They can care nothing about the effect of their actions upon the profession at large, or as to the fate of the men who entrust their education into their hands. Some of these so-called "professors" are men who are destitute of honorable principles, either in or out of the profession; so what can we expect their teachings to make of men who are students under them. But, at any rate, the fact confronts us that we have too many physicians already for our population, and that no more are needed for the present. One medical school would amply supply the needs of the whole Pacific coast for the next 20 years. Yet, in spite of overcrowding of the profession, there is not an honorable man within its ranks but is striving to with all the might that is in him to further reduce his own and his brother's income. See how, on every hand, we are fighting for better hygienic and sanitary laws, for better sewerage for our cities, and a more careful location for country homes. We are constantly seeking after and devising new and improved methods of battling with and preventing epidemics of every form. In no other profession or calling does such noble and honorable conduct call for our admiration. Surely there must be a Heaven, else doctors will never meet with their just rewards. In conclusion, we hope that the programme of this meeting will meet with your warm approval, and that you may return to your labors benefited in mind and body, and with kindly thoughts of the little foothill city where you have been welcome guests. At 9:30 this evening there will be a modest banquet served at the Freeman Hotel, to which you are all cordially invited.

President's Address.—JOHN FIFE, of Red Bluff, President of the Society, then delivered a brief address. He said: I can hardly tell you with what pleasure I discovered that the President is not required to make an address at the opening of the semi-annual meeting, and I can assure you that I shall avail myself of this precious omission to the full. If laws are made to be broken, as has been observed, I fear by-laws and constitutions are framed to be forgotten, and that this fear may not take the form and substance of reality, I desire to bring before you, very briefly, those clauses of our constitution bearing upon the objects of our organization, that we may discover how far those objects are being attained, and that I may have the opportunity of offering a few suggestions toward their furtherance. Our constitution says: "The objects of this Society shall be: (1) To promote the cultivation and advancement of medical science. (2) To encourage unity and harmony among regular practitioners of medicine and surgery throughout the district. (3) The association of members of the profession for mutual recognition, fellowship, and reciprocal improvement." I believe we have been fairly successful in the first object—individual effort has been stimulated, and the work has been of a fairly average character. If I might offer a suggestion, it would be, that in suitable cases, the work take on more of a clinical aspect. For example: At the last meeting a paper was read upon "Schleich's Method of Local Anesthesia," a method which is, perhaps, destined to supplant general anesthesia in minor operations. Now, I am convinced that the value and interest of the paper would have been enhanced and every member present convinced of its utility, had a practical demonstration of its operation been made. Again, in papers upon bacteriological subjects, the presence of the microscope and specimens would add immensely to their value. In a paper on malaria, the exhibition of the plasmodium would be interesting and profitable; and in treating of typhoid fever, an exhibition of the test of Widal would be instructive. The second object brings me to the important question of professional ethics. The regular profession, with the ball at its foot, has inflicted more harm upon itself because of a want of unity, than all its enemies combined; and the harm is inflicted by the few who are tolerated by the many. The few who, for the sake of a cheap and local notoriety, cast discredit on their brethren, and do not always bring disgrace upon themselves. The time is long since passed when any reputable practitioner has a patient "threatened" with typhoid fever. We all know that a patient either has or has not typhoid; and the man who makes a dishonest diagnosis to enhance his own reputation, lays himself open to the imputation of quackery. Then there are those who, when called in during your absence, make a practice of criticising your work or of broadly hinting that your diagnosis is at fault. Such men are handling edged tools, and are doing great harm to the profession. What shall we do? I am not of those who are looking for the dawn of the millenium. These things will happen when we are no more. But the fact that we cannot rid the whole world, is no reason why we should not keep our own door-steps clean. Therefore we, as a Society and individually, should do everything in our power to stamp out this sort of thing. We should at once instruct and warn the ignorant and the heedless; and we should drive the vicious out of the ranks of the regular profession, by refusing to recognize them. Thus by doing all that we can to sustain the reputation of one another, we shall further the best interests of the profession, and shall have done much toward the accomplishment of one of the prime objects of the Society.

Gunshot Wounds of the Liver, With a Report of Two Cases.—DAVID POWELL, of Marysville, read a paper upon this subject [published at page 393]:

DR. T. W. HUNTINGTON, of Sacramento: The subject is one of unusual interest, owing to developments recently made in Europe and America. Dr. Powell has reviewed the statistics bearing upon this topic very exhaustively, and it is unnecessary to rehearse them. Formerly it was believed that wounds of the liver were almost universally fatal. A few recoveries were, from time to time, reported after traumatic lesions of this organ, but in these reports there was usually in the mind of the reader a suspicion as to the correctness of the diagnosis. I think Jacobson was one of the first to call attention to the fact that wounds of the liver were amenable to treatment upon the same lines as other traumatisms. It is now clearly established, first, that hemorrhage from the liver substance may be controlled as in other localities either by packing or ligature. Second, that the presence of normal biliary fluid in contact with the peritoneum does not *per se* constitute a serious menace. An excellent plan in dealing with these wounds is to enlarge the external wound, locate the point of entrance of the missile into the liver, and then attach the capsule of the liver to the parietal wall, thus ensuring complete drainage and careful inspection of the lesion. Another fact has been noted by more than one observer, viz.: that loss of liver structure may occur without a fatal result. One authority reports a case in which the comminution of the left lobe of the liver was so extensive that a large part of it was excised in dressing the wound primarily. The patient went on to an uninterrupted recovery. I am very glad that the author referred to the general subject of wound-treatment. I began thinking of and writing upon this subject more than fifteen years ago, and have been a pretty constant thinker and talker in this relation ever since. It will bear all the time and attention any of us can devote to it. Success in this department of surgery depends upon careful, unremitting attention to details more than upon any other factor.

Some Unusual Cases in Ophthalmic Practice.—WILLIAM ELLERY BRIGGS, of Sacramento, read a paper on this subject [*vide* MEDICAL TIMES, vol. xi, p. 181].

DR. J. H. PARKINSON, of Sacramento: This is a very interesting series of cases, some of which are quite unusual. In listening to them I could not but feel that most of the gentlemen who had charge of them were fortunate in having the services of a specialist to share the responsibility. The two classes of cases that will appeal to most of us in general practice are those represented by the eye and ear affections mentioned by Dr. Briggs. I think the suggestions that were made this morning by the President of teaching the public are particularly appropriate here. In ophthalmic diseases and in middle ear suppurations the public has yet to learn that the affections are very dangerous. Mothers, and, apparently, nurses, have to be taught that ophthalmia occurring in infants is not the effect of "catching cold," but that it is often a dangerous disease. I know that in my own experience the prevailing diagnosis is that of catching cold, and libations of breast milk the usual treatment. Still, in mild catarrhal cases such methods will not be followed by disastrous results. There is, however, no doubt in my mind that ordinary cases of ophthalmia neonatorum, those cases that are allowed to run on with indifference to treatment for four or five weeks, and in which the baby is said to have weak eyes, lead to future trouble. I think I have seen some instances of that, and am certain it is the case. I do not mean to class these cases with gonorrheal ophthalmia, which, as we all know, requires most energetic treatment. At a former meeting of this Society I have stated that it was well for every practitioner to use a nitrate of silver solution where he has the least suspicion of infection of the eyes in a new-born child. I think a 2 per cent. solution is rather stronger than is desirable; a weaker solution is preferable. Regarding the ear cases I presume that, because the nurse or friends of the patient cannot see the source of suppuration it is not regarded as a serious matter.

DR. E. B. ROBERTSON, of Jackson: I want to say a few words to the Society on this gonorrheal ophthalmia. It was after I attended one course of lectures in the Medical College of the Pacific. I attended a woman in confinement, whose character was not above suspicion, and I afterwards ascertained she was afflicted with blenorrhea, and perhaps at the time the child was born. This child was attacked with acute ophthalmia. I treated it with sulphate of zinc solution, and also used nitrate of silver, but the child was blind until it died. I would like to ask Dr. Briggs what, if any, is the danger of opening the lateral sinus?

DR. T. W. HUNTINGTON, of Sacramento: I wish to say a word in regard to two points in connection with Dr. Briggs' paper. First, I want to emphasize the suggestion made by Dr. Parkinson, as to the necessity for educating the public upon general lines bearing upon such diseases as he deals with. The profession seems to be at fault, in not giving the public a certain amount of information relative to intricate conditions which are referred to the specialists. In my own practice I find it desirable to go into elaborate explanations which occupy time, that I can often ill afford. In doing this I endeavor to make clear to patients and their friends, just what has led up to the crisis at hand, and what will be likely to occur if certain conditions are not dealt with promptly. I have often asked patients who have been referred to me, what information did your former physician give you regarding this case, and the answer frequently was, he gave me none, but says it is more or less serious and did not enter into a detailed discussion. Patients under such circumstances are prone to accept their own theories and not those of their physician. For my own part I do not think it dangerous to give patients a more or less formal opinion and an explanation. The second point has reference to one case upon which

Dr. Briggs has operated. I happened to be present at the operation in which he opened the mastoid, and found pus more deeply located than in any case I have ever seen. I regard the method employed by Dr. Briggs, wherein he makes a very large opening and completely uncovers the mastoid cells, as the only rational plan of procedure. Until I had seen Dr. Briggs operate, I had been in the habit of opening mastoid abscesses with a small trephine or chisel. Having found the infected cavity, I depended upon its evacuation through a small orifice. This usually resulted in prolonging suppuration and tedious convalescence.

DR. BRIGGS, of Sacramento: I have very little to say in regard to the case Dr. Huntington refers to. I thought the paper would be too long if I went into all the details. I will say that the operation on the mastoid has been done very often during the past few years and with great advantage to the patients. A great many cases of mastoid disease will recover if drainage through the antrum and middle ear is maintained. A great many of these cases have, in the past, resulted fatally from want of an operation. and I have had them die on my hands while I was in dread of doing a proper mastoid operation. I have not had any die since I have learned to do a prompt and thorough operation, though I have done a large number of them. I was reading in a journal yesterday, of an operation done by a surgeon, an acquaintance of mine, who recommends opening the mastoid antrum by the use of an ordinary carpenter's gimlet. This, in my opinion, is very unsurgical and dangerous, for various reasons. I think the mastoid should be opened over the cells and thoroughly cleaned out. The overlying bone should be removed so that the diseased cavity can be thoroughly cleansed and allowed to heal from the bottom. Diseased tissue should all be removed even if we have to extend the operation to the cranial cavity. Regarding ophthalmia neonatorum, I think a very large percentage of cases are gonorrheal, which is not as serious in infants as in grown people. The secret in the treatment of either gonorrheal ophthalmia or ophthalmia neonatorum, is through cleanliness. This, I think, physicians too often neglect; they depend too much on the local application of nitrate of silver. As long as there is secretion, it ought to be washed out. I insist that the patient should have his eyes washed, both day and night, as often as pus collects in the eyes. If that pus is thoroughly washed out, and with the application of a nitrate of silver solution once or twice a day, very few of these infants will lose their vision. Gonorrheal cases in grown people are more serious and dangerous, but the point I want to emphasize to my patients is that a great deal depends on the attention of both patient and attendants in carrying out the instructions properly. If they do not do their part the surgeon cannot save the eyes. About three years ago, two infants with both eyes totally blind, were brought into my office in one day, and such cases occur more frequently than the general practitioner imagines.

DR. PARKINSON, of Sacramento: I should like to say that those of us who had the pleasure of reading or of listening to the Lane lectures by Prof. Macewen in September last, will remember that the lecturer emphasized very strongly that in his experience, which must be vast, only a few cases of brain trouble resulted from acute middle ear troubles. In other words, it is the chronic erosive processes that are followed by diseases of the brain. I do not think it would be necessary to operate upon many cases of cerebral abscess if these ear troubles were treated promptly and efficiently. I saw Professor Macewen operate upon the mastoid. The method he adopted is that to which Dr. Briggs alluded, with the exception that the Professor uses a dental drill or burr. He demonstrated that with this instrument he can run over the surface of the exposed lateral sinus. Prof. Macewen believes that this method is much safer both as regards the sinus and in avoiding that impact to the brain, which must ensue when the chisel is used. He said that death has followed chisel operations from violence to the cerebrum.

DR. HUNTINGTON, of Sacramento: I do not regard the use of the chisel in any sense as objectionable as is claimed by so eminent an authority as Macewen. It must be remembered that the brain is not in close contiguity to the mastoid process; hence the objection that the jar from the hammer and chisel is liable to injure the brain substance, is not a valid one. Personally, I like the chisel because it enables one to open the cells freely, and this I regard as a most essential factor in the operation.

Dr. Briggs, of Sacramento, in reply to an inquiry as to fatal hemorrhage following mastoid operations, said: No; I have never seen such a case, and I hardly know how to explain some we heard of years ago, before the operation was done as thoroughly as it is now. I have known cases to result fatally very suddenly during an operation of the mastoid process, by the old drilling process. I imagine those were due to anesthesia rather than to the opening in the sinus. We do not hesitate to open the sinus freely when it is indicated. In reply to Dr. Robertson, I may say that I have opened the sinus several times without knowing that I had done so. If there be no thrombosis I simply pack it with iodoform gauze. If there be a thrombosis I clean it out.

Puerperal Eclampsia.—O. Stansbury, of Chico, read a paper upon this subject. [*Vide* Medical Times, vol. i., p. 338.]

Dr. Thos. Ross, of Sacramento: I can recall seven cases of puerperal eclampsia during my term of practice. I do not know of any more alarming or heart-rendering scene that a physican has to encounter than that of a lying-in woman with puerperal eclampsia; the terrible contortions of the face, the staring, rolling eyes, grinding of the teeth, etc. The first of my cases was a very stout, robust full-blooded woman—a multipara—in her third labor. The convulsions came on without any premonition about the termination of the first stage of labor. They were violent and rapid, occurring every ten minutes, for four convulsions I withdrew about thirty ounces of blood from the arm, and proceeded to deliver her instrumentally, as quickly as possible. Delivery was accomplished easily. The convulsions were checked for about four hours, when they appeared again, but not with the same violence or frequency. About ten ounces of blood was taken, but still the convulsions continued, and the woman became comatose and died. The next case I had, the convulsions appeared after the completion of labor. I gave injections (rectal), giving chloral 40 grs. every six or eight hours, as required, for two days. This woman recovered and the child lived. In the case of a primipara, a very full blooded young lady, the convulsions occurred about the eighth month of pregnancy. Upon inquiring into the prior history, I learned that she had intense headaches about a week prior to that time, and a few days before I saw her she complained of flashes of light before her eyes. I saw her, in consultation with another physician, after she had had four convulsions. The convulsions were violent and the os was rigid. We concluded to deliver her as quickly as possible. In this case we used the scalpel, making an incision through the os externum, which dilated the womb sufficiently to use the forceps, when the woman was promptly delivered. The convulsions continued, although chloral and chloroform were freely given, and the woman became comatose and died about ten hours after delivery. The baby, in this case, lived about two days. In another case the woman had convulsions, coming on during labor; I do not now know at what stage. I gave hypoderms of morphine in large and frequent doses, which checked the convulsions. Her labor went on without any instrumental aid, after which the convulsions stopped, and the woman recovered. Of the seven cases, three died and four recovered. A woman who had had two pregnancies, with convulsions in both, in each instance the baby being born dead, informed me she had become pregnant again and was very much concerned about it. For three months prior to the time of delivery, I gave her 15 minims of fluid extract of jaborandi three times a day. She had no convulsions, and the child lived. I had another case where the woman had puerperal convulsions. In consultation with Dr. Craig, of Capay, I told the doctor about the case in which I gave the fluid extract of jaborandi, and advised that he try it if this woman became pregnant again. She became pregnant again, and the remedy was resorted to. This time she had no convulsions, and was delivered without any trouble. We may have puerperal eclampsia without any albuminuria, but we always have renal insufficiency. My habit of treating pregnant women who have albumin in the urine is to give them tincture of the muriate of iron in large doses, combined with acetate of potash, which I think has a very good effect. It is difficult to get patients to take the usual milk diet for the required time. I have never used veratrum viride. As a substitute for bleeding it has been strongly recommended in large doses, 15 minims to a drachm every fifteen minutes, until the pulse becomes soft or vomiting sets in. After the convulsions cease smaller doses are recommended, keeping the pulse at 50 or 60 in a minute. I have no doubt that veratrum viride during an attack is a very efficient remedy. I agree with the author of the paper in condemning morphine, chloral and chloroform during the comatose condition. In fact, I think when coma sets in, in puerperal convulsions, there is nothing that will be of any benefit to the patient. Perhaps the hypodermic use of pilocarpine might be tried, but as a rule, when coma sets in, your case is lost.

DR. E. B. ROBERTSON, of Jackson: I feel I would like to recite one or two cases I treated in my early practice. I was called ten miles into the country, and when I arrived at the house the woman was in a violent convulsion. I made an examination and found that the head was already engaged in the pelvic excavation, but I had no forceps. She was a plethoric woman. I bled her, taking twenty ounces, and delivered her in half an hour afterwards. She made a good recovery. Last fall I was called to see a woman who was past the eighth month. She was a strong, plethoric woman. I regarded the case with fear and trembling, expecting that convulsions would set in before the time of labor. I concluded to take time by the forelock and bled her, taking twenty ounces, without any convulsions being present. I raised her limbs, placed her in position, made incisions into her limbs, allowing the water to fall on a rubber cloth and thereby drained this effusion. I gave her half an ounce of bitartrate of potash and ten grains of jalap as a starter. The result was she went on to term on that course of treatment, and I have never witnessed a more favorable recovery. The albumin disappeared in four days after parturition, and there was no further trouble. I believe that, in cases of plethoric women, with full and hard pulse, there is no reason why they should not be bled, and with much confidence of doing good and little fear of doing harm. I am willing to own up before the profession that I have bled after Bennett condemned bleeding. I find a great many advocates of John H. Bennett's practice, but I believe that Meigs was as sound as Bennett. I do not carry blood-letting as far as Dewees. It is a remedy that should be judiciously used. There are times in these cases of puerperal convulsions when we have no remedy equal to venesection in the management of these cases. I use it, and I intend to use it, because I think it is an excellent remedy.

DR. J. H. PARKINSON, of Sacramento: Dr. Ross' remarks regarding convulsions occurring in cases without albumin remind me of a case which occurred in my practice, one of the severest I have ever seen, in which there was no albumin in the urine before delivery, and I have a record of that fact. I am tolerably certain that I examined the urine two weeks before her confinement; of this I have no record, but of an examination made a week previous I have a record showing its absence. The convulsions set in with the beginning of labor, and the case was comatose to the end. The convulsions were the most violent I have ever seen and were uncontrollable. The os was dilated manually and the woman delivered instrumentally, with a great deal of difficulty. At no time was the pulse full, hard and bounding, nor were there any leading indications for blood-letting. I attempted to fill the bowels with water, but the fluid would not be retained. An attempt to introduce water into the stomach was also futile. The presence of even a considerable quantity of albumin in the urine of a pregnant woman may not be followed by convulsions; there is some other factor involved.

DR. R. F. ROONEY, of Auburn: I have had no experience with veratrum viride in puerperal convulsions, but I have used it in convulsions in children with great benefit. I remember three cases in which I used it last summer. I gave it in half-drop doses, repeating it every hour, if necessary. I have never seen anything work more nicely than it did in those cases. The temperature fell, the pulse came down, the skin resumed its action and the children made a rapid and a good recovery. My attention was first called to this remedy in the *Medical News*. Tincture of veratrum viride, half-drop doses, for each year, up to six was recommended. I have never had occasion to use it in children except in those three cases. The children were about five years of age.

DR DAVID POWELL, of Marysville: I cannot agree with the author in his disapproval of the use of morphine and chloral in the treatment of puerperal eclampsia. The state of coma or loss of consciousness which follows the convulsion, is usually of short duration. The patient soon awakes to a condition of semi-consciousness, which is often followed, after a short interval, by a recurrence of the convulsions. Now, my experience with these cases has impressed upon me the efficiency of a full dose of morphine hypodermically at once, or 40 to 60 grains of chloral by the rectum, administered with a view of controlling and preventing subsequent attacks. In many cases, too, as Dr. Robertson has well pointed out, blood-letting is a most rational procedure, relieving, as it does, the congested, irritable condition of the brain and nerve-centers which, whatever may be the theories advanced regarding the pathological conditions leading thereto, are constant etiological factors in eclampsia. I have in mind several cases wherein free venesection in plethoric patients gave immediate relief, and the convulsions did not recur. I have had no experience with veratrum viride, but it is an old remedy and many competent observers have testified to its value. The question of the constant presence of albuminuria in puerperal convulsions has been raised; and in this connection I want to say that I have notes of one of the worst cases I have ever witnessed, in which there was no albumin in the urine of the patient at any time, either before or after her delivery. I had made repeated examinations of her urine and failed to find any trace of albumin. While undoubtedly a large majority of these convulsions are dependent upon some renal disease, still we should not be unmindful of the fact that there are many cases attributable to reflex irritation arising from functional disorders of other organs.

DR. ROONEY: Upon what theory can morphine be administered in uremic convulsions? We know that morphine checks elimination, and we have, at the same time, certain other untoward effects. I have serious doubts as to the use of morphine in these cases.

EVENING SESSION.

Bromine as a Topical Application in Diphtheria.—E. B. ROBERTSON, of Jackson, read a paper on this subject [*vide* MEDICAL TIMES, vol. xi, p. 185.]

DR. O. STANSBURY, of Chico: I have taken a great deal of interest in the paper just read, but so far as the use of bromine in diphtheria is concerned, I do not know anything about it. I have had considerable experience in the treatment of diphtheria. I think, several years ago, I read a paper upon this subject, and at the time I read it I thought I had a good remedy for the disease. A few weeks after I had a couple of cases and lost both of them, and I came to the conclusion it was not so successful. I believe, as the doctor has stated, that diphtheria, in the beginning, is a local disease, and I believe it is essential that we should begin treatment as early as possible and as often as possible apply local applications. I do not believe that we have any specific remedy for the disease; I believe some cases will die in spite of everything we can do. There are cases in which the posterior portion of the nose is affected where it is difficult to make local applications, and we are pretty apt to lose these cases. There are some cases, as diphtheritic croup, which are very hard to manage; I have never had any experience with the new remedy that we hear so much about—antitoxine—but I have thought if I got hold of a severe case I would try it, but if the doctor's remedy is such a good treatment, I should prefer that.

DR. J. H. PARKINSON, of Sacramento: Perhaps it is hardly in order to discuss the paper, as only one who has had any experience with the remedy under consideration can do so. We have diphtheria in the nose, larynx, and fauces, and I think our experience is that the laryngeal form is rapidly fatal, while nasal diphtheria, in my observation, is frequently followed by septic infection We have in diphtheria three causes of death: (1) Laryngeal stenosis (2) Constitutional sepsis. (3) That condition of paralysis which occurs in some cases and which no treatment seems to prevent. I think that in meetings like this, where men from different sections of the State come together, that nothing can be more valuable than their personal experiences in different localities with this dread disease. Regarding antitoxine, I have had some little experience with it. The statistics for the past year show one of two things—either many cases are diagnosed and treated as diphtheria, without a bacteriological examination, that are not such, or else antitoxine is doing more than any remedy which has preceded it. I have not such unlimited faith in antitoxine that I am prepared to drop all other treatment. In every case I used the same local treatment, as in other cases. In two cases in which it was used in sufficient quantity, the child having recovered from all the local symptoms, died from what might be termed a paralysis of the heart and lungs. There seemed to be no obstruction to respiration. The other child died in seven weeks after all local symptoms had disappeared. I used Behring's antitoxine in these cases. I do not think the question of the character of the antitoxine cuts so much figure. I think that made by Parke, Davis & Co., is perfectly reliable, and I have employed it successfully. When we use certain lines of treatment and the case gets well, we are apt to ascribe the result to the treatment. We might use something else and they would get along quite as well. All we can do is to be guided by our best judgment. I have used Mulford's antitoxine, and the Gibier preparations, both moist and dry. I am open to conviction, but I shall continue to use antitoxine until I find something better. The mortality from tracheotomy in diphtheria is very high, and it is here that the greatest possibilities of antitoxine are shown by recent statistics. A large number of cases reported as diphtheria are not such. On the other hand, frequently you will find the mildest possible cases to be diphtheria. In one family in my practice there were 5 cases. In one case there were no local symptoms, only constitutional disturbance, the pharynx was clean, there was no membrane. Another child showed only a little exudate in the pharynx, no well marked membrane at any time, yet it gradually sank and died 8 weeks later. A third child died of laryngeal stenosis, in 48 hours, with no symptoms in the pharynx. It is difficult to arrive at a diagnosis in cases where the general and local symptoms are so mild, and unless in a position to make a bacteriological examination, we will always be in doubt in regard to a correct diagnosis.

DR. T. W. HUNTINGTON, of Sacramento: All authorities agree that cases of diphtheria, complicated with septic or streptococcic infection, are not amenable to antitoxine treatment. Now that we have antistreptococcic serum, it will be of very great interest to determine whether, in these cases of double infection, the use of the combined serums will prove efficient. I have had but one opportunity to demonstrate, personally, the value of antitoxine. I shall relate it briefly, because of the urgency of symptoms and the rapid response which attended the use of the agent. The patient was a girl of 14 years, who had been exposed to infection 8 days previously. I saw her in the evening, 36 hours after the first appearance of the symptoms. There was then noticed dyspnea, fetor of breath, great prostration, a temperature of 102° F., and a characteristic deposit upon tonsils. The usual remedies were prescribed and I saw her at 8 the following morning. The temperature was then 104°, pulse, 120. Respiration rapid and difficult. The nostrils were plugged and discharged a sanious fluid. She was breathing entirely through the mouth. In every particular the case promised a fatal termination. I gave 500 units of Behring's serum, and repeated the dose at noon. The condition was more favorable that evening, and she commenced to improve rapidly. At the end of the second day the membrane had partly enfoliated, the nares were clear, respiration normal, and pulse and temperature nearly so. This case impressed me so deeply that I have felt that to omit the use of the antitoxine in a similar instance, would be to ignore the most potent remedy at hand.

DR. THOS. ROSS, of Sacramento: I wish to relate one case I had about three years ago. An epidemic of diphtheria broke out about ten miles below the river, there being about 24 cases in all. There were four deaths. I had one child, about a year and a half old, with marked exudation of the fauces and nares, a disagreeble odor of the breath, cyanosis and labored, croupy respiration. The child died in half an hour after my arrival. The next time I went down I found a child, fourteen months old, in about the same condition. It being quite a distance from town, and thinking she would die anyway, I gave about four or five powders, each containing two grains and a half of the mild chloride of mercury, one to be given every hour. I constructed a canopy over the cradle with a sheet, placed about x grs. of the mild chloride on a hot stove lid under the canopy and had the child inhale the vapor arising therefrom. I left three powders with instructions to use them in a similar manner every hour, so that the child would have the calomel powder or the mercurial vapor every half hour. Next morning I expected to find her dead, but, to my surprise, she was better. By the use of tonics and the local application of carbolic acid and sol. ferri subsulph. in glycerine she got well, and was not salivated.

DR. W. E. BRIGGS, of Sacramento: I am very skeptical about a new specific for diphtheria. I agree with the author of the paper in his description of the disease and its causes, but I very much fear that if he meets with a severe epidemic he will have difficulty like some of the rest of us. I account for the apparent favorable results from the fact that different epidemics are of varying intensity, and as they vary in severity the death rate in a certain epidemic may be high under good treatment, while in another and milder epidemic the death rate may be low, even with no treatment. I am very much inclined to think that the results which Drs. Robertson and Cameron speak of were due to the mildness of the epidemics in which they found their remedies so efficient. I have been in hopes that the antitoxine treatment would prove to be a specific in diphtheria, but am not entirely convinced. Men using it extensively, in whose judgment I have much confidence, believe in its efficacy. It seems to be the most rational of any treatment we have. I know since it has been used in Sacramento I have not had to do tracheotomy so often in laryngeal diphtheria, so it seems to me that the treatment has a specific effect; but I cannot say that I am altogether convinced of its great efficiency.

Dr. J. S. Cameron: Have you ever been successful in tracheotomy for laryngeal diphtheria?

Dr. Briggs: Yes, several times.

Dr. Huntington, of Sacramento: With regard to the efficiency of antitoxine in laryngeal cases, it seems that statistics are more conclusive than in ordinary cases. For example, where the mortality in cases requiring tracheotomy formerly reached 70 or 80 per cent. it does not now exceed 30 or 40 per cent. Dr. A. M. Henderson, of Sacramento, now has a case in which the diagnosis was confirmed by bacteriological examination. Tracheotomy became necessary in conjunction with the use of antitoxine. The case went on to perfect recovery, though the tube was worn for several months.

Dr. David Powell, of Marysville: It will be admitted that the value of any new remedy can be correctly estimated only by the accumulation of observations from a large number of cases. As Dr. Parkinson has suggested, if we all relate our experiences we may come to some conclusion as to the real value of these remedies. My experience in the use of anti-diphtheritic serum is limited to one case, and it is the only case of diphtheria I have seen in Marysville for a number of years. Although no bacteriological examination was made, it was, I think, a typical case of diphtheria. The membrane covered the tonsils and uvulva, there was considerable difficulty in breathing, but no laryngeal trouble. In response to a telephone message the Secretary of the State Board of Health promptly sent a supply of the serum, and that evening 1,000 antitoxin units were injected. The temperature at that time was 104.6° F., the breathing very much obstructed, patient restless, and had slept but little during the two previous nights. The effect was marvelous. The following morning the temperature was 101° F., the membrane had ceased to spread and appeared shriveled on the edges, the breathing was better, and the patient had passed a comfortable night. The injection was not repeated, and without any further treatment, other than the use of stimulants, antiseptic gargles, sprays, etc., and attention to diet, the patient made a rapid recovery. The improvement in this case was so remarkable and so prompt that it must be attributable to the effect of the antitoxic serum.

Dr. Parkinson: In one family I used antitoxine in two cases, and one of these proved fatal seven days after the symptoms had disappeared. That child had laryngeal, pharyngeal and nasal diphtheria, and was very bad. In addition to constitutional treatment, solution of peroxide of hydrogen (Marchand's) was used for irrigating the nose, and the throat was swabbed with iron solution and carbolic acid. I saw the child three or four days before any croupiness or any pharyngeal symptoms appeared, and when there was no redness of the fauces. The child was in my office on the morning of the day on which I first used antitoxine. The total quantity used was 4,000 units. Injections were given twelve hours apart. All symptoms, local and constitutional, disappeared in that child. The fauces looked normal, the ulcers were healing, and no trace of membrane could be seen anywhere. Yet between seven and eight days the child died. I mention this case because the antitoxine had produced all the local and constitutional results that might have been expected, and why there should have been a fatal issue I do not know. The heart's action was good half an hour before death. The child appeared to die from a respiratory paralysis.

THE PRESIDENT, DR. JOHN FIFE, of Red Bluff: When I returned from New York, after my graduation, I brought with me the formula of Dr. Thompson, consisting of bromine and bromide of potassium in aqueous solution, which he recommends very highly as a remedy for diphtheria, applied locally or given internally. When I reached home, I was asked by the physician in attendance to visit with him a family of six children, all ill with a very severe type of diphtheria. He had been using pilocarpine principally, then very highly recommended by the Germans as a remedy for diphtheria. I suggested that he try the bromine treatment, which he did in two or three of the cases. They all died. The patients had been ill for five or six days, and for that reason I do not consider that the test was a fair one. I have, however, never used it since. I have in the course of my practice, in Red Bluff, on two occasions, met with diphtheria of a malignant type; of four cases in one family three were of this type, and in spite of energetic treatment on accepted lines, they all died. I believe that in diphtheria we have no specific remedial agent, unless we have it in antitoxine. I have used antitoxine in a case of diphtheria of a severe type about four weeks ago. The effect, it seemed to me, was marvelous, and I shall certainly use it again when the necessity arises.

DR. ROBERTSON, of Jackson: In 1864, I acquainted Dr. Frank Hale with the bromine treatment, as used by Dr. Haerchner, at Mokelumne Hill. He used bromide of potassium instead of alcohol as a solvent, and with good results. The bromine solution changes its character within 24 hours, and becomes hydrobromic acid, and therefore should be frequently renewed for use. Dr. A. T. Hudson, of Stockton, writes me that bromine was used in the United States Hospitals during the war, in varying strengths, as an antiseptic in cases of gangrene and with good results. You will excuse me when I say I have been skeptical as to the use of antitoxine. I regard it as a fad, not unlike other fads within our recollection, viz: The injection of the colon, for the cure of consumption, Brown-Séquard's life rejuvenator, and Koch's tuberculin; it is destined to a short life. The enthusiasm with which American physicians grab at every fad emanating from Europe is as ridiculous as is the eagerness of American heiresses seeking to obtain European titles. I can pledge you my word that the results of my treatment of diphtheria with bromine, have been precisely as I have stated. I have little fear of the disease when I have bromine within my reach. I believe I am correct. I have been questioned by physicians as to why I had not brought this before the profession before now. My reply was, that it requires no small amount of courage for a country doctor like myself, to ignore all preceding authorities and set himself up as an original observer. But I determined to bring it forward now, in the interest of humanity. I have nothing to gain by, nor interest in, deceiving you, and I offer it for what it is worth. I may add that Dr. DeChesne, of Alameda, writes me that he has used the bromine treatment to his own satisfaction, ever since I acquainted him with it, about twenty years ago, in Calaveras county. Dr. Geo. J. Brown, of Fort Bragg, writes me in these words: "You call it dogmatic, but I call it doggone good treatment for the disease." Dr. W. E. Dozier called it "the boss treatment for the disease," after witnessing its effects in my hands.

Early Experiences in Midwifery.—J. S. CAMERON, of Red Bluff, read a paper upon this subject. He said he did not propose to bring forward anything new, but simply to record some experiences in the professional life of a young man 28 years ago. His first obstetrical case proved to be one of placenta previa. On arrival, the patient was found pulseless, the heart's action even being extremely feeble The hemorrhage, which had been very severe, had ceased, and the labor pains had also stopped. After consultation with other physicians, he waited for reaction, and then applied the forceps, including the placenta with the head. Having brought the child well down in the pelvis, the forceps were removed and reäpplied to the head alone, delivery being effected without much difficulty. The child was dead some time before delivery. The mother made a rapid recovery, but lost her life two years afterwards in child birth, being then in the country, at quite a distance from medical aid. The nurse in attendance said she had flowed to death. The probability, therefore, was that she had again been the subject of placenta previa. The following year the speaker said he was called out early one morning to attend a lady living 15 miles in the country. Hearing that she had had a spasm, he provided himself with his medicine case and with chloroform, in addition to the usual obstetrical impedimenta, and, after losing his way and driving off the road some distance, he found the case. The patient, on his arrival, was in one of the severest attacks of eclampsia he had ever seen. After waiting a few minutes he found that consciousness did not return. Digital examination showed the cervix to be hard and indurated, with no sign of relaxation. He at once applied a liberal amount of belladonna ointment to the cervix, bled her freely, gave chloroform by inhalation, and hydrate of chloral by rectal injection. In about two hours the cervix was dilated manually. The labor pains continued satisfactorily. In the afternoon, after consultation, the forceps were applied with some difficulty, and a dead child was delivered soon after, but without any injury to the mother. The convulsions ceased after delivery, but consciousness never returned.

DR. THOMAS ROSS, of Sacramento: I listened to Dr. Cameron's paper with interest. The use of belladonna reminds me of the experience of a young physician who heard much of the beneficial effects of the local application of ungt. belladonnæ in relaxing a rigid os. When he was called to attend his first case in midwifery he provided himself with a liberal supply of the ointment. Singularly enough he found on examination that the patient had a remarkably small and rigid os. He applied the ointment without stint. Some time after he was called to the bedside—to "come quick, the baby is born." The young doctor was astonished to discover that the infant's anus and nates were anointed with a liberal supply of unguentum belladonnæ.

DR. DAVID POWELL, of Marysville: I want to add my testimony to Dr. Huntington's experience in regard to the use of normal salt solution in cases of hemorrhage. A few weeks ago I saw, in consultation, a case of ectopic pregnancy. The hemorrhage from the ruptured tube was profuse, and upon opening the abdomen the cavity was found filled with blood. The use of the saline solution during the operation—the patient being almost pulseless—saved her from immediate death. Her pulse became stronger and she rallied from a state of impending collapse. A quart or more of the fluid was injected into the cellular tissues and a large quantity into the bowel. I believe its value in all cases of sudden, profuse hemorrhages cannot be overestimated.

Dr. W. R. Cleaveland.—The Committee on Resolutions on the death of Dr. W. R. Cleaveland presented the following, which was unanimously adopted: WHEREAS, This Society has been called upon to mourn the loss of W. R. Cleaveland; and whereas, we have known him as a man of sterling worth and eminent ability; therefore be it

Resolved, By the California Northern District Medical Society that we tender our sympathy to the relatives of the deceased, and that this resolution be spread upon the minutes of the Society, and that a copy of the same be forwarded to his son.

THOS. W. HUNTINGTON.
B. CALDWELL.
O. STANSBURY.

Amendment to Constitution.—The amendment to the Constitution presented by DR. J. H. PARKINSON, of Sacramento, at the meeting in October, proposing to change the date of the semi-annual meeting to the second Tuesday in June, and that of the annual meeting to the second Tuesday in November, was then taken up, and after some discussion, was adopted unanimously.

Place of Next Meeting.—DR. O. STANSBURY, of Chico, extended a cordial invitation to the Society to hold its next meeting at Chico. The invitation was, on motion, accepted.

New Members.—At the different sessions the following were duly elected members of the Society: J. M. York, Martin Schnabel, R. H. Ashby.

REVIEWS AND NOTICES.

W. B. **Saunders** has in preparation for early publication "An American Text-book of Genito-Urinary and Skin Diseases," "An American Text-book of Diseases of the Eye, Ear, Nose, and Throat," "MacDonald's Surgical Diagnosis and Treatment," "Ander's Theory and Practice of Medicine," "Senn's Genito-Urinary Tuberculosis," "Penrose's Gynecology," "Hearst's Obstetrics," "Moore's Orthopedic Surgery," "Heisler's Embryology," Mallory & Wright's "Pathological Technique," Sutton & Giles' "Diseases of Women."

Anomalies and Curiosities of Medicine: Being an encyclopedic collection of rare and extraordinary cases, and of the most striking instances of abnormality in all branches of medicine and surgery, derived from an exhaustive research of medical literature from its origin to the present day, abstracted, classified, annotated, and indexed. By George M. Gould, M.A., M.D., and Walter L. Pyle, M.A., M.D., with 295 illustrations in the text, and 12 half-tone and colored plates. Philadelphia: W. B. Saunders; pp. 960. Price, cloth, $6 net; half morocco, $7 net.

In this volume the editors have succeeded in bringing together a vast amount of material, both instructive and interesting. Struck by the fact that, while medical literature of all ages has dealt largely with rare, peculiar or extraordinary cases, the authors deemed it worth while to attempt a systematic gathering of medical curiosities. Here may be found, in text and illustration, almost all the noteworthy and extraordinary cases that fall within the recollection of the average reader. In addition to these he will find many of which he has never heard, the histories of which are often accompanied by quaint illustrations that have been derived from old-time writers. Apart from the interest attaching to such a collection there is undoubtedly a considerable element of practical value, from a forensic standpoint. In courts of law the question of possibility frequently arises, and here will be found many instances in cases in support of the oft-repeated statement that few things in medicine can be dogmatically ruled to be impossible. The authors state that they contemplate constantly increasing their data, and they will, therefore, be glad to receive information regarding curious or anomalous cases in the past or in the future.

An American Text-Book of Obstetrics for Practitioners and Students. By James C. Cameron, M.D., Edward P. Davis, M.D., Robert L. Dickinson, M.D., Charles Warrington Earle, M.D., James H. Etheridge, M.D., Henry J. Garrigues, M.D., Barton Cook Hirst, M.D., Charles Jewett, M.D., Howard A. Kelly, M.D., Richard C. Norris, M.D., Chauncey D. Palmer, M.D., Theophilus Parvin, M.D., George A. Piersol, M.D., Edward Reynolds, M.D., Henry Schwarts, M.D. Richard C. Norris, M.D., editor; Robert L. Dickinson, M.D., art editor; with nearly 900 colored and half-tone illustrations. Philadelphia: W. B. Saunders; pp. 1010. Price, cloth, $7; sheep, $8; half Russia, $8.

Continuing the series inaugurated some years ago by the "American Text Book of Surgery," the publishers have offered, from time to time, a number of valuable companion volumes to the profession. In the present volume, which is amongst the latest of the series, we believe that all former efforts have been surpassed. In the great advancement which the science of gynecology and of obstetrics has made within the past two decades, this country has largely aided. It is, therefore, with much satisfaction that we can pronounce the work before us to be, not only up to date in all its details, but also to possess a distinct value on account of its individuality. In the mechanical make-up of this volume little is left that could be desired. The illustrations are far superior to those usually found even in the best class of text-books, and they are also more numerous than in any work of similar scope of which we have any knowledge. Many are full-page in size, and quite a number are in colors. The old style engraving, so often incomplete, or so inaccurate as to be misleading, is here replaced by modern photographic processes, so that absolute accuracy can be secured. In this matter of illustration, for the first time an effort has been made to carry out systematically certain principles. The figures have been drawn to scale; in sagittal sections; the same half is always shown for easy comparison. The left half, as a rule, has been chosen because of its greater familiarity to practitioners by the treatment of patients in the latero-prone position. This alone serves to emphasize the statements we have already made in the matter of illustrations. It is impossible to comment at length upon a work which leaves so little for criticism and so much to commend. There are, however, some points to which the reader's attention should be particularly directed. The first of these is the instruction in the matter of antisepsis. Here, as in other cases, while giving the opinion of numerous authorities, the editors have not hesitated to express their own views where a distincttion needed to be drawn. The remarks on anesthesia in labor are exceedingly valuable, and should be read by those who, in the present day, seem prone to yield to the clamor of patients. In the management of labor, the section on tying the cord, on ophthalmia, and on the care of the perineum and its repair are both excellent and strictly practical. It is refreshing to find that a dose of ergot after the termination of labor, is regarded as not only useful as a preventive of hemorrhage, but that it is also valuable as an antiseptic measure. This, with the commendation of the old-time abdominal binder, is positively refreshing in these days of new fangled ideas that would dispense with methods the value of which has been recognized for many years. Everywhere throughout the volume will be found the same practical effect in its teachings. It is, therefore, not only an advanced text-book, but a safe guide for the practitioner, and as obstetrics forms a large and responsible part of the practice of every physician, we know of no work amongst the newer ones recently issued, that will so well repay him as an investment.

THE ILLS OF INDIGESTION, THEIR CAUSES AND THEIR CURES, in three essays. By Herman Partsch, M.D., author of a prize work on seasickness. North Berkeley, Cal. Published by the author.

The author, who is already known to the profession in California as a prize essayist of the State Society on the subject of "Seasickness," has again laid himself open to criticism by a more ambitious production. He states that his object in this instance has been "to put on record certain facts * * * learned during the last 25 years on topics comprehended under the title of dyspepsia, and to make those facts available for the use and relief of those whom they most concern." There is very little doubt that, as the doctor states, "dyspepsia is the mother of more ills than it has ever received credit for," and Americans, if not a nation of dyspeptics, at least supply a high proportion of sufferers from this most depressing condition. As this book has been written as a help to the profession, it is at least discouraging to find at the outset that, in the first case reported by the author, the handsome fee assured by the sufferer, when ill, failed to materialize when, through prolonged and skillful treatment, he had been restored to health. The book must be read to be appreciated. It cannot be regarded as a systematic treatise. In style, it is interesting, and considerable evidence has been accumulated in support of the position of the author, that "dyspepsia and its dependent ills are as mysterious to the most recent sufferers as they were to Darwin and Carlyle." The evidence adduced from these two distinguished and historical dyspeptics, as taken from their writings, comprises more than one-third of the volume. It is, however, useful, if in nothing else than in emphasizing what may be accomplished by great minds, though hampered by feeble bodies. The discursive style of the book makes it interesting, and those of the profession who may, personally, be sufferers from this dread disease will find this experience of the author both interesting and helpful.

WARNER'S POCKET MEDICAL DICTIONARY of to-day, comprising pronunciation and definition of 10,000 essential words and terms used in medicine and associated sciences. Philadelphia: William R. Warner & Co. pp. 338.

Warner & Co , of Philadelphia, have recently issued a pocket Medical Dictionary, comprising 10,000 of the essential words and terms in use in medicine. An effort has been made to render this little volume as concise and yet as perfectly comprehensive as possible, both as regards definition and pronunciation. Many common words have been omitted "because their definitions are so well known as to obviate their necessity for classification." The size of the work will enable it to be carried in the pocket without difficulty, and it is, therefore, of value to the student, in the lecture or class-room.

ELECTRICITY IN ELECTRO-THERAPEUTICS. By Edwin J. Houston, Ph.D., and A. E. Kennelly, Sc.D. New York: The W. J. Johnston Co. Price, cloth, $1.00.

This small volume will be found useful by those desiring to grasp the basal scientific facts which underlie the practical application of electricity in medicine. In a general and not too technical way, the subjects of electro-motive force, electric resistance, the electric current, varieties of electro-motive forces, electric work and activity, magnetism, the various types of apparatus for the production of the different currents, and, finally, the dangers in the therapeutic use of electricity are all reviewed. In so doing the authors have avoided the employment of language so technical as to be unintelligible to the average medical reader, and at the same time they have not hesitated to employ the necessary terms explaining their scientific equivalents wherever this seemed necessary.

SURGICAL HINTS FOR THE SURGEON AND GENERAL PRACTITIONER. By Howard Lilienthal, M.D., Assistant Attending Surgeon to Mount Sinai Hospital, New York. New York: *International Journal of Surgery* Company.

This little pamphlet contains a number of useful hints and common sense suggestions, covering, mainly, operative procedures, with the preparations for them, and a very brief review of the more familiar special operations. The remarks on the subject of instruments and their purchase are decidedly sound. The author says, "in purchasing surgical instruments, select, by preference, those which are large enough and strong enough to be used with comfort Toy instruments * * * are even worse than useless * * * An aseptic pocket case is a scientific absurdity."

AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY, under the general editorial charge of George M. Gould, M.D; second year, in one volume of nearly 1,200 pages, profusely illustrated with numerous wood-cuts in text, and 33 handsome half-tone and colored plates. Price: cloth, $6.50; half-morroco, $7.50. Philadelphia: W. B. Saunders.

Dr. George M. Gould and his publisher, W. B. Saunders, of Philadelphia, must realize that, in one instance, at least, their efforts have been fully appreciated by the profession. The Year-Book for 1896 was cordially received by the medical press and by the profession, and this reception was fully deserved. The volume for the current year, now before us, fully maintains the standard already set for this work, and at the same time the editor has managed to condense within a volume of moderate size a sufficient epitome of the year's progress to be distinctly helpful. As is the case with all the later works of this publisher, the illustrations are numerous and of the highest class. If future issues continue to display the same excellent judgment in the selection of material, the permanent success of the Year-Book is assured.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held June 2, 1897, the following were granted certificates to practise medicine in this State:

Newell J. Brown, Hailey, Idaho; Dartmouth Med. Coll., N. H., Nov. 3,'75.
Henry E. Fleckenstein, Portland, Or.; Med. Dept. Univ. Oregon, April 5,'97.
Alvin Ford, Glendale: St. Louis Med Coll., Mo., Feb. '63.
Wm. Francis Freeman, Pomona; Royal Coll. Phys. and Surg., Edinburg, Scotland, Oct. 30,'84; Fac. Phys. and Surg., Glasgow, Scotland, Oct. 30,'84.
John H. Fulkerson, Bakersfield; Beaumont Hosp. Coll., Mo., Mar. 16,'93
Beniah R Job, Portland, Or.; Med Dept. Univ. of Oregon, April 5,'97.
Wm. W. Kergan, Oakland; Mich. Coll. Med. and Surg., Mich., Mar. 15,'92.
Wm. F. Perry, (lieu certificate) Perris; Kentucky School of Med., Ky., June 30,'85.
Clarence Quinan, San Francisco; Washington Univ., Mo., April 29,'97.
Max Rothschild, San Francisco; Sup. Bd. of Ex., Berlin, Prussia, Feb. 26.'97.
Daniel F. Royer, Orange; Jefferson Med., Coll., Pa., Mar. 11,'75.
Raymond G. Taylor, Los Angeles: Coll. Med., Univ. Southern Cal., June 3,'96.
Chas. W. Thomas, Milton, Or.; Jefferson Med. Coll , Pa., April 27,'92.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific) from May 20, 1897, to June 20, 1897.

Leave of absence for three months, to take effect on or about June 15, 1897, is granted Major Edwin F. Gardner, Surgeon, Fort Grant, Arizona.

Captain Isaac P. Ware, Assistant Surgeon, is relieved from duty at Madison Barracks, New York, and ordered to Fort Grant, Arizona, for duty.

Leave of absence for one month is granted First Lieutenant William F. Lewis, Assistant Surgeon, Fort Apache, Arizona.

ITEMS.

Dr. E. A. Trommald has removed from the German Hospital, San Francisco, to Tacoma, Washington.

Mississippi Valley Medical Association.—The next meeting of the Mississippi Valley Medical Association will be held in Louisville on October 5, 6, 7 and 8, 1897. All railroads will offer reduced rates. The President, Dr. Thos. Hunt Stucky, and the Chairman of the Committee of Arrangements, Dr. H. Horace Grant, promise the meeting will be the most successful in the history of the Association, and this promise is warranted by the well-known hospitality of Louisville and Kentucky doctors. Titles of papers should be sent to the Secretary, Dr. H. W. Loeb, 3559 Olive Street, St. Louis.